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ABSTRACT

This report informs readers on the state of regional vocational training reform in Russia and shares experiences on how present problems and challenges have been addressed by a joint international development project. The three chapters of Part I present information from the perspective of the European Training Foundation: "Introduction to the Pilot Project on Vocational Education and Training (VET) Reform in North-West Russia" (Timo Kuusela); "Regional VET Reform: A Bottom-Up Approach" (Arjen Vos); and "Joint International Cooperation" (Arjen Vos). The six chapters of Part II present information from the perspective of the Russian partners involved in the project. This section is introduced by comments, "The Russian Perspective" (Oleg Lebedev). The chapters are "Problems in Reforming the System of Initial Vocational Education in Russia" (Evgeny Butko); "The Labour Market and the Social Partners" (Nicolay Balalayev); "Reforming the Content of Vocational Education" (Elena Vasina); "Upgrading the Qualifications of Teaching Staff--Training the Teaching Staff in New Curricula and Syllabi" (Victor Shapkin); "Managing a Vocational Education System in Conditions of Transition to a Market Economy" (Oleg Lebedev); and "Conclusions" (Oleg Lebedev). Appendixes contain information on the following three regional programs: Leningrad Oblast, Novgorod Oblast, and St. Petersburg. The first two are analytical articles, written by experts from the regional education management authorities, and the third is the text of a regional program. (YLB)

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Two perspectives on reforming the regional system of vocational education

Based on the pilot project in the North-West Regions of the Russian Federation

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The European Training Foundation is an agency of the European Union which works in the field of vocational education and training in Central and Eastern Europe, the New Independent States, Mongolia and the Mediterranean partner countries and territories. The Foundation also provides technical assistance to the European Commission for the Tempus Programme.

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Foreword

This report aims to inform readers on the state of play of regional vocational training reform in Russia and to share our experience on how the present problems and challenges have been addressed by a joint international development project. We hope that this report will give rise to new project ideas and increase the interest of the donor community and other interested parties in supporting the countries in transition to cope with the challenges of their vocational training reforms. Information is presented from two perspectives: that of the European Training Foundation and that of the Russian partners involved in the project.

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Part I
The European Training Foundation perspective

1. *Introduction to the Pilot Project on Vocational Education and Training Reform in North-West Russia*

The initiative for the pilot project dates back to the informal meeting of the Council of Education Ministers of the European Union, which was held in St. Petersburg in September 1994. One of the conclusions of the meeting was to "reinforce cooperation efforts through joint projects". A decision in principle on the project was taken during the visit of the Russian Ministers for Education and Labour to Turin in 1995. In September 1995, the Ministers for Education of Austria, Flanders, the Netherlands and the Russian Federation, together with the European Training Foundation, agreed to combine their efforts in the field of vocational training in the North-West regions of the Russian Federation. At a later stage of the project, Finland and Germany expressed their willingness to participate. The first phase of the project started in June 1996 and was completed at the end of 1998. The project objective is to develop applied models for the reform of the vocational education and training system at regional level through strengthening the interaction between that system and the labour market and the economy. The second phase, a three-year follow-up to this pilot project, is underway at the time of drafting this report.

The following regions of North-West Russia are involved in the project: St Petersburg City, the Leningrad and Novgorod Oblasts and the Republic of Karelia. Besides these regions, the Pskov and Murmansk regions participate in a number of activities. At school level, the project is implemented in selected pilot schools (see annex), covering both initial and secondary vocational education and training in four economic sectors: telecommunications; tourism and hospitality; transport; and wood production and processing.

The project aims at achieving reform at both school and administrative levels. At school level the reform, in four economic sectors, concentrates on:

- the strengthening of relations between schools and enterprises;
- the definition of new occupational profiles for which there is labour market demand;
- the development and implementation of new curricula and syllabi;
- the development and implementation of new teaching and learning materials;
- the introduction and implementation of new teaching methods;
- the implementation of new school management approaches; and
- the development of continuing vocational training courses, for adults.

The core of the project is cooperative activities involving Russian and Western European training institutions in the four selected economic sectors. The sectoral activities include teacher training, curriculum development, management and technical training, training needs analyses, study tours to European training institutions and upgrading of teaching equipment. These activities are financed by the E U Member States who are partners in the project.

At intermediate level, the project aims at strengthening the teacher training system by introducing active learning and teaching methods and upgrading teachers' skills and knowledge. It is intended that a new qualification of "vocational teacher-instructor" having well-developed skills in both vocational pedagogy and practical work, will be developed in the course of the project. Such a model qualification would aim to bridge the previous strict distinction between teachers of special subjects and "industrial training instructors" (masters).

At administrative level, the project aims at:

- supporting the development of plans for reform of regional vocational education and training policy, based on a clear definition of responsibilities of the regions compared to those of the federal authorities;
- setting up organisational mechanisms for a structural dialogue with the social partners and other key actors and for a regular assessment of labour market developments; and
- strengthening inter-regional cooperation.

This model presupposes that successful innovations in vocational education and training depend heavily on the adoption of a common approach by regional administrations and schools. Policy development and experimental implementation of innovation go hand in hand. In the first phase of the project, the emphasis was put on a 'bottom-up' approach, with a lot of attention being paid to labour market assessment as a tool for revising content and curricula. The concrete results and the cooperation of the schools in the sectors have stimulated the regional administrations to initiate inter-regional cooperation and policy development. This coincides with the process of decentralisation of responsibilities for vocational education and training from the federal to the regional level. The second phase will have a strong focus on supporting regional administrations to develop regional vocational education and training strategies, using the experience and findings of the project. The administrations will need to encourage a situation in which innovation is initiated at school level. Their primary role is becoming one of facilitating developments in vocational schools.

1.1 *Strengthening school-enterprise relations through labour market assessment*

From the outset of the project, the pilot schools have involved the main stakeholders in a relevant assessment of the local labour market. Each sector has had to develop an action plan on how to involve the stakeholders in vocational education and training planning and invited them to discuss closer cooperation in the context of the project. The labour market assessment will provide effective, and sustainable results will be achieved, only when the main stakeholders, such as relevant employers, enterprises and regional administrations, come to an agreement and are seriously commited to participating in the reform of the vocational education and training sector. A new round of labour market assessment, focusing on qualitative aspects and skills, has been carried out under the guidance of the Russian and EU experts during 1999. The labour market assessment should result in the definition of employers' qualification requirements in a number of selected occupations and, thus, facilitate the development of appropriate occupational and educational standards and subsequent curriculum development.

Besides being involved in labour market assessment, the pilot schools have examined the possibilities of providing training courses for enterprises, organising practical work experience for students and teachers in the enterprises and having staff of enterprises give lectures in schools. This has helped to establish ongoing cooperation between schools and enterprises.

The pilot schools have faced problems in motivating enterprises and other social partners to cooperate in vocational education and training reform. They have learnt that cooperation in a market economy has to be beneficial to all parties, and enterprises cannot be considered as sponsors of vocational schools, as was the case in the past. Relevant enterprises and social partners have to be identified and a new role for all stakeholders in vocational education and training reform has to be developed. Vocational schools cannot be the only initiators in this process. In the first phase of the project, the relatively passive role and the low level of interest among regional policy-makers meant there was no real assessment of the impact and applicability of the lessons learnt at policy-making level.

In the first phase of the project, a lot of attention was paid to quantitative labour market information. The gathering of qualitative information in terms of skills needs, and the validation of this information, requires greater effort and structured cooperation with social partners. However, at present, there are no clear mechanisms to allow for consultation on the results of the labour market assessment with the relevant social partners, which should provide a basis for developing appropriate qualification structures and vocational education and training policies or strategies. Consequently, it is unclear how relevant and sustainable the new professions, standards and subsequent curricula, designed on the basis of the labour market information, will be as far as the future needs of the labour market and economy are concerned, particularly where the information is gleaned from single schools or training institutions.

1.2 *Curriculum and standards development*

The inflexible framework of Federal Standards hampers curricular innovation at regional and institutional levels. Increased adaptability and flexibility is crucial for reforming educational standards and introducing new approaches in standards development. The current standards limit creativity and innovation at school level and do not make it easy for students to move between different educational levels. The introduction of a regional component to the Federal Standards has, however, given some flexibility to regional initial vocational education and training systems. This problem is recognised by federal and regional decision-makers and efforts are being made to find appropriate solutions in the framework of this project, too.

The lack of equipment and teaching aids has been identified as a major obstacle to the launching of vocational training for various new professions and to the development of new curricula. This is a particular problem for the occupations involving new technologies. The vocational schools must find solutions through cooperation with enterprises, organising placements for teachers and instructors in companies etc. However, federal and regional authorities must bear the main responsibility for supporting vocational schools in this respect, and major investments in vocational education and training, in terms of upgrading the facilities available in vocational training institutions, will be essential in the near future.

During the transition period, the market changes very quickly and the employers' responses often focus only on short-term needs. At the same time, education cannot be guided by the needs of individual employers. It is necessary to analyse the results of the labour market survey carried out in 1999, from the point of view of their sustainability and to identify changing trends in the tasks, operations and skills required of employees..Revision of existing educational programmes and the

development of new ones should give students a broader educational base. Furthermore, the labour market assessment has shown that the identification and introduction of "core skills" will become increasingly important as graduates need to have greater employability, flexibility and job mobility.

1.3 *Decentralisation of vocational education and training management*

During the 1990s, vocational education and training management has been largely decentralised to the regions. The degree of decentralisation in terms of responsibilities varies from region to region. This is described in more detail in the later chapters of this report. The decentralisation process has, however, brought a number of problems at the regional level to light. These are also being addressed by the project.

The principal change arising from decentralisation of vocational education and training management has been a transfer of decision-making authority to school level, as has happened in St Petersburg. Today, vocational education and training schools are established and registered as autonomous legal entities with their own bank accounts. They develop and implement various educational services and receive funding on the basis of individual *service agreements* signed with the regional education authority. This change has had a considerable impact on the overall framework in which schools operate. However, these agreements have not, as yet, led to a true service agreement reflecting the government's demand for educational and training services in exchange for guaranteed school funding. This would require vocational education and training administrations to carry out new management functions and apply new management techniques to their task of providing guidance to autonomous vocational schools.

In the past, vocational schools were under the direction of the Federal Ministry. As a result of the decentralisation process, however, they have become a central link in the Russian training system. They have been transformed into autonomous institutions which are expected to operate in the educational and training services market. For this purpose, their legal status, as well as their management and control system, should be reviewed and modified. In the current situation, the operations and outputs of vocational schools are not sufficiently transparent, while principals are not formally accountable for the operation of their schools. Management of individual vocational schools appears to *be overly centralised,* as school principals combine their responsibilities with that of the chairmanship of School Committees. At the same time, principals continue to rely on the vocational education and training administration with regard to labour market demand for qualifications, interaction with industry, development of educational standards, skills assessment etc. The allocation of revenue to schools and the income disbursement process remain untransparent. School revenues rarely contribute to improving the quality of the training process, to the purchasing of equipment or to the maintenance of school buildings.

Recent discussions with the regional vocational education and training authorities has revealed that, although they now have considerable freedom in the management of the vocational education and training system, these authorities are calling for a national policy framework to provide broad guidelines for the local development of the training process. The absence of such guidelines has resulted in the lack of local policies. The most serious consequence of this is the complete absence of any organised and monitored continuing training system.

Against this background, the project intends to address the constraints identified above by providing school principals and the vocational education and training authorities, at various levels, with the information, tools and training necessary to develop new strategies and policies. It is also hoped to identify management mechanisms which would help them carry out the new tasks and responsibilities facing them in a decentralised regional vocational education and training system.

1.4 *What has been achieved?*

From an analysis of the main results of this pilot project, we can conclude that, without doubt, the project has been successful in many ways. The results achieved so far have been assessed in detail in the various chapters of this report. Apart from the planned outcomes, the project has led to many positive, albeit partly unintended, results.

The pilot schools have improved their skills in international cooperation significantly, as a result of working in a complex undertaking and finding solutions to unexpected problems that arose in the course of the project. For most of the pilot schools, this was their first experience of an international project. All the Russian participants have acquired knowledge and new skills in project planning, development and implementation and this, in itself, is invaluable. The 'international dimension' of their daily work has enriched their performance and increased their motivation.

The pilot schools and other participants acquired a lot of experience in *teamwork*, which is quite a new phenomenon in Russia. The joint implementation of activities brought training institutions, regional authorities and other partners closer together. The schools learnt to work with various social partners, in trying together to find solutions to often complex problems. The pilot schools are continuing to actively develop this type of cooperation. One cannot say that, prior to the project, they did not cooperate with the representatives of industry, enterprises or other employers, but the project has enriched this cooperation and raised it to a new qualitative level. The partners really work together to develop the content of training and to take the requirements and expectations of the employers into consideration. Moreover, the attitudes of industry and the authorities vis-à-vis vocational education and training issues has fundamentally changed and laid the foundation for further development.

Significant changes have taken place in the content and provision of vocational education and training. The pilot schools have developed new educational standards, developed new curricula and courses and revised the old programmes. Training methods and approaches are changing and training itself is becoming more and more client-oriented. Such developments will gradually lead to significant changes in the structures and quality of training provision and the organisation of the teaching process.

Through innovation and experiment, the project helped to identify the major problems the vocational education and training system faces at federal, regional and institutional levels in the areas of management and the quality of teaching staff as well as with regard to the principal clients: students and employers. Consequently, a sound basis for future actions has been created.

The active participation of school directors has resulted in a change of the management structure in a number of schools. Further transformations, such as the introduction and application of principles of strategic planning, quality control systems and changes in management style, are being put in place.

The project, which was relatively short-term and did not include the provision of any equipment, has yielded unexpectedly important and significant results for each pilot school. Therefore, despite the labour intensive nature of the project, the motivation of the participants has increased substantially. The project showed the Russian participants that they could change the content of vocational education and training content significantly by working in close cooperation with their newly acquired partners - both foreign and Russian. The participants are also willing to share their positive experience with non-participating schools and regions and this is already taking place.

1.5 Implementation

The pilot project is a cooperative action involving Austria, Flanders (Belgium), Finland, Germany (only in Phase I), the Netherlands, Sweden and the European Training Foundation. The Foundation has overall responsibility for the coordination and monitoring of the project and for the organisation of information events, dissemination activities and a number of 'horizontal activities'. The countries involved have a common responsibility for the 'vertical' or sectoral activities or agreed horizontal components.

The Committee for Education of the St Petersburg administration coordinates the project from the Russian side. It nominated a Russian project manager who, together with a counterpart from the Foundation, is responsible for the management of the project.

The project is overseen by a Steering Committee which meets twice a year and includes representatives from the federal and regional education administrations, labour and employment authorities, the participating EU Member States, the social partners and the Foundation.

In addition to being implemented in North-West Russia, the results of the project and the lessons learnt from it are being disseminated to many other Russian regions through the facilities provided by the EU technical assistance programme.

2. Regional Vocational Education and Training Reform: a Bottom-Up Approach

The pilot project, «Vocational Education and Training Reform in North-West Russia» is, at present, the largest international project aimed at supporting the vocational education and training sector in the Russian Federation. Although the project is only halfway to completion in 2001, the results so far are considered to have made a very useful contribution to vocational education and training reform. This chapter sets out the ideas behind the design of the regional innovation model, which was used in the project and is based on a bottom-up approach to vocational education and training reform. The results of the first three years are also presented and analysed.

2.1 Starting conditions

The pilot project decided to focus on regions in the North-West, as this is the area closest to the European Union. Saint-Petersburg City, the Leningrad and Novgorod Oblasts and the Republic of Karelia were selected as the most relevant regions for cooperation. In addition, these regions showed a keen interest in participating. Given past experience in international cooperation, the regional education and labour administrations were very modest in their expectations. The regions did not have a clear strategy for reform of the vocational education and training system and were only recently given responsibility for this sector by the federal Ministry of Education. At the same time, cooperation between the education and employment authorities was, in many cases, not well developed.

The next step was to design a project that would bring the vocational education and training system closer to the needs of the regional economy and its labour market. The regional authorities selected four economic sectors that were of major relevance for the development of the region and nominated 2-4 pilot schools to deal with each of these.

At the start of the project on 16 June 1996, 19 pilot schools were selected for the following economic sectors: telecommunications, tourism and hotel and catering, transport and wood production and processing. The schools initially showed some reluctance to invest time in a project that does not pay fees to the beneficiary schools and, moreover, does not provide equipment. Furthermore, it was felt that it would not be easy to burden teachers with an extra workload at a time when there were considerable delays in the payment of their salaries.

2.2 *Project concept*

The objective of the project was to contribute to the development of a regional vocational education and training reform programme, which would correspond better to the requirements of the labour market. In the belief that vocational education and training reform requires concerted action from the key players in vocational education and training, a number of activities were planned to support policy-makers in developing new vocational education and training ideas. However, the majority of activities focused on supporting the schools. The activities should, in the end, focus on all the crucial issues that vocational education and training reform has to deal with in the transition from a centralised to a market-oriented and more decentralised economic and government system. More specifically, the project should contribute to:

- the development of models of labour market assessment and the application of these at both regional and school levels;
- the involvement of the social partners and, in particular, the development of new mechanisms for school-enterprise relations;
- the development of new occupational profiles and standards;
- the development of new curricula and related teaching materials;
- the training of teachers; and
- the training of school and regional education managers.

The project has strongly emphasised a bottom-up approach, starting with activities at school level. This approach was chosen in a situation where federal responsibilities were delegated to the regions, without a clear idea of what consequences this would have for the management of the regional vocational education and training system. Regional vocational education and training administrations and vocational schools seemed unprepared for their new roles as autonomous actors. The regional authorities were not ready to take a leading role in the reform of vocational education and training. At the same time, it was necessary to show early and concrete results to raise the expectations and encourage the involvement of the Russian partners. Starting with the design of a new programme before implementing it would have taken too much time and would have risked a conflict of interests.

The EU partners (Belgium, Finland, Germany and the Netherlands) concentrated their activities, at the sectoral level, on cooperation with the Russian pilot schools: choosing occupational profiles, initiating labour market assessments and developing new curricula. The European Training Foundation was responsible for the organisation of 'horizontal activities', aimed at making European good practice on a number of crucial issues available. A second objective of the workshops on labour market assessment, vocational education and training finance and new learning concepts was to initiate a dialogue between the regional education administrations and the pilot schools. The workshops also provided opportunities for the pilot schools to exchange experiences of sectoral activities and to develop a network of pilot schools.

A bottom-up approach presupposes that the results of activities at a lower level, will slowly influence decisions and actions at higher levels. For this to happen, however, it is essential that all levels are kept informed and, even more importantly, are involved in the project. The project was initiated by the Russian Federal Ministries of Education and Labour. The regional authorities were part of the Steering Committee and were involved, from the outset, in decision-making and in 'horizontal activities'. However, in the first phase, their role was more one of an observer than of an active participant. By the end of the project, the regional authorities should be familiar with the role of orchestrating vocational education and training reforms and be able to play a crucial role in steering the process of dissemination of the experience to other schools in the region. The second phase of the project, therefore, includes an important sub-activity to support the regional authorities in developing regional vocational education and training reform strategies and actions.

2.3 *Project results*

Although it might be premature to draw conclusions on the results of the project after three years and with two years to go, we can already identify some changes that have occurred and some lessons that have been learned. These results will have to be built on and expanded, if a sustainable process of vocational education and training reform is to be in place in the regions, when the project finishes at the end of 2001.

The rest of this section is given over to a summary of the major achievements of the project.

a) Labour market assessments introduced and school-enterprise relations developed

In the Soviet period, state enterprises had a strong influence on the planning of vocational education and training. In many cases, they had several vocational education and training schools under their control. The number of students in different specialisations was planned on the basis of the enterprises' needs for skilled workers. The Soviet government collected all the industrial plans and used these to analyse requirements. This type of labour market assessment focused, in particular, on the numbers of specialists to be trained.

The first phase of the project has clarified the objectives and methodologies of labour market assessments in a period in which economic developments in a market economy are difficult to predict. The importance of quantitative labour market assessments is in decline and there is a trend towards more qualitative assessments of skill requirements.

In the bottom-up approach used, the first step was to draw up questionnaires to be used as a tool to re-develop contacts between the pilot schools and enterprises in the area and to assess what local enterprises expected from schools, in terms of numbers and types of graduates. This was not simple, for two reasons. First, vocational education and training schools were more used to reacting, than to taking initiatives. Secondly, many enterprises were not interested in vocational education and training or could not formulate their future requirements. Only a few enterprises gave a positive response to the schools. However, the exercise did provide a basis for the (slow) development of new relations between schools and enterprises. The labour market assessment exercise has been repeated annually and the response to it has improved.

The second step was to set up consultative councils in the different sectors, in which regional education and sector authorities, vocational education and training schools, enterprises and branch organisations were represented. The objective of these councils has been to stimulate a dialogue on labour market developments in the sector and on educational requirements. The first council was established in the tourism sector, followed later by the other sectors and regions. Various models of cooperation (sectoral, regional and school-based) were developed.

The results are growing cooperation between schools and enterprises. The first concrete instance of cooperation was between a major telecommunications provider, Novgorod Telecom, and a pilot school for telecommunications in Novgorod. Besides the dialogue on skill requirements, the company asked the pilot school to train its existing staff and offered some of its staff to give lectures to the students. Other elements of cooperation, which are useful to enterprises, are:

- renting of school premises to enterprises for training;
- contracts for training placements in companies;
- involvement of enterprises in the development of qualifications and standards; and
- information about labour market assessments.

The second phase of the project will concentrate on what schools can do with the results of the labour market assessments and on how to translate them into educational requirements.

b) New curricula developed

The labour market assessments have been used for the development of new occupational profiles and curricula. For each of the four sectors, two or three occupational profiles have been selected. In line with the bottom-up approach, the pilot schools devised their own methods for each sector. Activities in the telecommunications sector were centred very much around the delivery of new teaching equipment and the focus in the development of new teaching materials was clearly on how to use this equipment. In the other sectors, there were no plans for the delivery of new equipment and the development of new curricula had priority. Existing curricula were analysed from the perspective of new requirements and the activities focused on elements to be integrated into the revised curricula.

An interesting phenomenon was that, in the sector where the delivery of equipment was the major priority, it was difficult to maintain some schools' interest in the project once the equipment was installed. Schools were tempted to develop their own ways of using the new equipment, without changing their curricula. In the other sectors, the need for new teaching equipment became apparent after the new curricula had been designed. For example, in the transport sector, the growing number of Western cars to be repaired meant that schools needed engines from foreign-made cars to train people to fill that niche in the labour market. In this instance, new equipment is at the heart of curriculum innovation and teachers are motivated to learn to use the equipment for teaching purposes.

In the second phase, the results of the project to date will be evaluated. An inter-sectoral working group on curriculum development has been set up for this purpose and will make recommendations on a more structured methodology for labour-market-based curriculum development. The identification of core skills will be an important element of this.

c) Teacher-training and the role of teachers

One of the most important results is the change in the mentality of project participants. Initially, the extra workload and the lack of compensation did not do much to motivate teachers to participate. However, the fact that a lot of activities were taking place in, and for, schools and that there were study visits to EU countries, contributed to a growing interest among teachers and school principals and both these groups are now more open to change.

The mid-term assessment of the project in early 1998 already noted a change in the teachers' and principals' attitudes to the project. As the project developed, participants were increasingly willing to take initiatives and showed that they were becoming more and more aware of the advantages of cooperation and of sharing information and tasks.

In the first few years of the project, the teachers have been trained to work with new curricula and teaching materials. This process will continue during the rest of the project. The second phase will focus on the consequences for teacher training. At present, there are no institutes that offer specific training for vocational teachers, nor is there a separate profile for vocational teachers and instructors. The project will try to develop a new qualification for vocational teachers/instructors, which will cover both the practical and the theoretical teaching of vocational subjects. This experience can be used for the development of retraining courses for teachers.

d) Networks of vocational education and training schools

As a result of their involvement in a large number of sectoral and horizontal activities, the school principals and teachers from the pilot schools have met regularly and have built up formal and informal networks. There is a regular exchange of experience and information between them. This is a crucial element in the development of innovative actions.

The network will be extended in the second phase through the adoption of so-called partner schools. These partner schools can come from the same regions and sectors or from regions which are new to the project, such as Murmansk and Pskov. The pilot schools will support the new partner schools with the new curricula and teaching materials and with their expertise. These networks of schools will have an important role to play in achieving sustainability and the further dissemination of results.

e) Network of regional vocational education and training authorities

During the pilot project, an informal network of regional education authorities was created. The objective of the network is to discuss regional vocational education and training policy strategies in the light of the new responsibilities of regional education authorities. Preliminary ideas on vocational education and training reform have been developed and are annexed to this publication. The network also discusses the results of the pilot project.

This network, which has been extended to include authorities from Murmansk and Pskov, will be the target group for a staff development programme in the second phase of the project. This programme will support the further development of vocational education and training reform policy and its implementation.

The results of the pilot project have also attracted increasing attention from the Federal Ministries of Education and of Labour. They consider the project to be important for the whole Federation. Representatives of the federal ministries will participate in the staff development programme.

2.4 *Conclusions*

The pilot project has the ambitious goal of contributing to the overall reform of vocational education and training in the regions of North-West Russia. Vocational education and training reform can only be successful if there is concerted action by the federal and regional authorities and vocational education and training schools. In the absence of a clear, regional vocational education and training reform policy, the project has opted for a bottom-up approach, putting the initial emphasis on activities for curriculum reform at school level, where it is easier to achieve concrete and visible results. If the project is to gain more support and commitment from regional and federal authorities, it has to demonstrate that the strategy it has adopted is effective and correct.

The major challenge of the second phase will be to make the results which have been achieved at school level sustainable and an example for curricular reform for other areas and, in particular, to translate these results into policy and implementation strategies as a basis for vocational education and training reform in the regions as a whole.

Cooperation between the different donors has been crucial to achieving the critical level of support necessary for a major project to support vocational education and training reform. It also became evident that there is no single way of achieving vocational education and training reform. The involvement of experts from various EU vocational education and training systems demonstrated to the Russian participants that they have to make choices and to select a vocational education and training system that fits into their regional economy and labour market.

3. *Joint International Cooperation*

3.1 *History*

The pilot project is unique from the point of view of the number of donors involved in it. In some international projects, two, or a maximum of three, donors manage to work together but, in the North-West Russian project, five EU countries and the European Training Foundation have managed to agree on the objectives, outputs and activities of a common project.

After a meeting between the Russian Minister for Labour, Mr Melikian, and for Education, Mr Tkachenko, with the European Training Foundation, a proposal for a pilot project on vocational education and training reform in North-West Russia was put forward. The proposal got support from the Ministers for Education of the Russian Federation, Austria, the Flemish Community of Belgium and the Netherlands, who met on 30 September 1995 in St Petersburg. Two months later, Finland and Germany joined the project.

During the identification mission in November 1995, representatives from all interested donors and from the four participating Russian regions agreed on the general outline of the project. In each of the four economic sectors (telecommunications, tourism, transport and wood), two EU countries would cooperate with two Russian regions, while the European Training Foundation undertook management of the project and the organisation of a number of inter-sectoral activities.

3.2 *Model of donor cooperation*

To capitalise on the strengths of the donor countries, each of them has chosen economic sectors that are of importance to its economy. There was also the opportunity to incorporate issues related to specific vocational education and training or other topics where the donors were thought to have a particular expertise.

For this reason, a decentralised management structure was set up, in which each donor was given responsibility for well-defined parts of the overall project. Each donor had the opportunity to invest an appropriate budget and to allocate it to the activities that they thought should have priority. Moreover, each donor could follow its national contracting and tendering procedures and involve the most suitable national institutes. The European Training Foundation used its tendering procedures, which are in line with those of the European Commission and give equal opportunities to all EU Member States. The length of these procedures hampered the project coordination in the initial phase.

Within the agreed framework and objectives, Finland, for example, has invested in the wood and telecommunication sectors, but also in the horizontal activity on project design and planning. Germany has invested , in particular, in the provision of equipment for the telecommunications schools. The Netherlands and Belgium have jointly invested in the tourist and the transport sectors, but have also organised a number of cross-sectoral activities. Sweden has invested, in the second phase, in developing a continuing training system both at administrative and school levels.

3.3 *Management structure*

The structure of the project is quite complex because of the many different countries, Russian regions, economic sectors and schools involved. The fact that many donors work together in a decentralised structure does not make it any easier. The complexity of the project has required a rather heavy management structure and, in particular, has created a serious need for circulation of information. English and Russian are the working languages. Belgium has supported the upgrading of the English-language skills of a number of Russian key actors in the project.

The contributions of the EU donors focused on cooperation at school level in the four economic sectors. Every sector has an EU sector manager, representing the two or three EU countries involved in the sector, and a Russian sector manager, who coordinates the participating schools from the Russian regions.

The project and sector managers have met every three months in St. Petersburg to discuss progress and exchange experiences. Communication and information are crucial factors in achieving coherence in the project. At the beginning, problems arose because of lack of information and of differing expectations. The 'duty' of providing information was sometimes felt to be too heavy and bureaucratic. It took almost a year to build up an adequate information base for the key players in the project and for them to realise the mutual benefits of a regular exchange of information. This has had a positive influence on general attitudes towards the project.

The Russian manager and her assistants have had a more difficult task: coordinating 17 schools and regional education and employment authorities in four regions. The support of the Russian sector managers has alleviated their job a little but the task was too big to fully involve and stimulate all the Russian actors to participate actively. Therefore, some Russian regional managers are included in the follow-up project.

3.4 *Conclusions*

Five EU countries and the European Training Foundation contributed to the first phase of the project with a total budget amounting to around 1.7 million ECU. The second phase also includes five EU countries (Sweden joined and Germany left) and the three-year budget is over two million Euro. The countries have agreed on a common project proposal and action plan. Each of the countries has taken responsibility for a part of the project and finances it according to their national regulations and procedures. Through this decentralised way of financing, the countries have had full control over their contributions and their participation in the project.

The decentralised donor cooperation model has several major advantages:

- The contributions from different EU countries, each of which has its own vocational education and training system, will bring to the Russian regions a lot of different approaches to help them define their vocational education and training strategies, without copying examples from the EU directly.

- Through the combined funds, a substantial impact on vocational education and training reform in the Russian regions has been made possible. The donors, individually, would not be able to achieve this.
- The involvement in different sectors and the mutual exchange of experience has enriched the project.
- Each donor has allocated its own budget through its national procedures. Common procedures would have led to following the most rigid system, which is, in this case, that of the European Training Foundation. Now every donor has, through its activities, made a visible contribution but, at the same time, it benefits from the results achieved by all those involved in the project.

For the four Russian regions, the decentralised structure and the inter-regional cooperation were a new experience which gave each of the regional authorities the opportunity to show what they were capable of.

To achieve these benefits it has been necessary to invest time and money in:

- strong coordination and a relatively heavy management structure; and
- internal communication and meetings.

In the case of the pilot project in North-West Russia, the results have been worth the extra efforts made by all the participants. While, in the beginning, the extra investments were mainly a burden, in the course of the project it was felt that the exchange of information and experience was necessary and enriching and that it stimulated better performance.

Part II
The Russian perspective

The following chapters were prepared in 1998 and analyse the experience of reforming regional vocational education and training systems from the perspective of several important factors: labour market analysis and cooperation with the social partners; development of new curricula and syllabi; training teaching staff to work with the new curricula and syllabi; and ways of improving the management of vocational education at regional level and school level and the difficulties encountered. This analytical material is preceded by a section which gives an overview of the general problems affecting reform of the Russian system of vocational education. These chapters contain a selection of material describing future scenarios for a range of regional vocational education and training systems.

The main objective of the project was to establish effective models for vocational education and training reform programmes which could be applied in other sectors of the economy and in other regions in Russia. With this objective in mind, the results expected from the programme and a brief description are given in the table below. This detailed projection of aims at the initial stage of the project was pivotal to the structuring of goal-oriented activity for all the vocational education and training organisations taking part. This approach to profiling the aims of the project provided a way of highlighting changes in school activity which would occur during the project.

Table 1
Implementation of the project: projected results

Expected results	Brief description	Substantiation methods
1. Labour market demands in the sectors assessed and the resulting information applied to determine training requirements.	1. Information on labour market assessment now available. 2. Information on labour market assessment analysed in teaching institutions and assessed by the stakeholders concerned. 3. Training institutions take steps to introduce new trades and professions.	1. Planning documentation. 2. Reports on labour market assessment. 3. Interviews. 4. Plans.
2. New trades and professions outlined, using the labour market assessment. curricula, regional standards and teaching materials developed for the new trades and professions identified in the four sectors.	1. The new trades and professions to be introduced within the framework of the project are clearly outlined. 2. Tutors work on new curricula or make changes to existing ones. 3. Training institutions develop or make changes to regional standards, with the involvement of the stakeholders, where necessary. 4. Teaching materials and resources developed in training institutions.	1. Planning documentation. 2. Preliminary curricula. 3. Preliminary standards. 4. Interviews. 5. New teaching materials. 6. Observations.

Expected results	Brief description	Substantiation methods
3. Teachers and instructors trained in the application and further development of curricula and new teaching materials and methods.	1. Courses or seminars run for teachers and instructors.	1. Report on courses (seminars).
4. Links between Russian training institutions taking part in the project and their foreign partners are reinforced.	1. Contracts and agreements signed between training institutions.	1. Cooperation agreements.
5. New links between training institutions, enterprises and social partners are established. New opportunities for cooperation with enterprises are outlined. New forms of cooperation are adopted.	1. New forms of cooperation introduced. 2. Training institutions have permanent working contacts with enterprises and social partners to nurture cooperation. 3. Enterprises make contributions to curriculum content and qualification requirements.	1. Planning documentation. 2. Interviews with institutions and enterprises. 3. Documents and plans.
6. The most acceptable opportunities for disseminating experience at regional level are analysed.	1. Plans for disseminating experience fleshed out.	1. Plans, texts of proposals.
7. Understanding of important problem areas in vocational education and training has sharpened and improved.	1. Number of teachers who have been trained. 2. Stakeholders recognise that new knowledge and know-how can be applied in training institutions and at management level. 3. Changes in methods, other changes.	1. Interviews. 2. Planning documentation. 3. Observations. 4. Plans.
8. Management practices in training institutions have improved.	1. Business plans drawn up annually and used. 2. Existing plans are revised. 3. The teaching institution teams and the administration note changes in management. 4. New work technologies at management level are adopted.	1. Plans and documentation in teaching institutions. 2. Interviews. 3. Observations.

Steering Committee and mid-term evaluation

A Steering Committee was set up to formulate an overall strategy for the pilot project and to coordinate the efforts of all its stakeholders. It was decided that the Steering Committee would take decisions by consensus. Should any disagreement arise amongst the stakeholders, decisions would be taken by vote. The Chairman would have the casting vote in disputed cases. The Steering Committee would not take decisions on financial matters. The funding agencies would be able to veto any resolution concerning finance. It was decided that the project would have a decentralised structure. The participating countries would have the right to develop plans and budgets in the various sectors, independently, within the framework of general project strategies. The Steering

Committee would comment on the progress of the project and on decisions to be implemented by the project management and sector managers.

A mid-term evaluation of the project was carried out in the course of the first phase of implementation. The group of evaluators included Russian experts recommended by the Ministry of General and Vocational Education and the Ministry of Labour and experts nominated by the European Training Foundation. The evaluation report showed that the first year of the project had led to substantial positive changes in the operation of the educational institutions and regional vocational education and training authorities. All the training institutions had conducted a labour market assessment and the majority had begun to develop new curricula and prepare teaching materials. Training for teaching staff to work with the new curricula had been organised. Efforts had been made to organise cooperation between the training institutions and the employment services. Effective forms of cooperation between vocational education institutions and enterprises and other social partners were in place. Several training institutions had begun to undertake structured reorganisation to enable them to respond better to market demands.

The mid-term evaluation and the Steering Committee discussions on the progress of the project identified significant difficulties in reforming the system of vocational education. These difficulties were often related to objective factors, such as the extreme shortage of material and financial resources in the educational institutions involved in the project. This lack of resources was an obstacle to modernising both teaching and methodology in the training institutions and hampered the introduction of new curricula and syllabi. Ongoing problems arising from the lack of resources, such as funds for the training institutions to pay staff salaries, led to a situation where the managers of many educational institutions and regional management structures were forced to concentrate on day-to-day matters and were unable to devote sufficient attention to strategic planning for the development of vocational education.

As a concomitant of this, training institutions and management bodies were slow to implement set plans during the project and there was a certain passivity and lack of initiative among individual managers. This factor, which is more subjective in nature, added to the difficulties involved in reforming the vocational education and training system.

A further subjective reason for these difficulties was the reluctance of participants to cooperate. It was noted that a number of educational establishments made contact with the social partners only reluctantly and enterprises were often distrustful of proposals advanced by the vocational schools. Sometimes there was competition rather than cooperation between the education bodies and the Employment Service. In some cases, the educational institutions did not want to share information with other training institutions.

These symptoms cannot be explained solely in terms of the personal qualities of individual managers of regional vocational education and training systems and educational institutions, although the experience gained in running the project indicated the need to take these elements into account when selecting participants for the project and, in particular, when appointing the team of project coordinators. The subjective causes of difficulties in reforming the vocational education and training system are all related to traditional attitudes to vocational education, its functions, objectives and organisational principles. These attitudes need to be re-examined in the context of the current social and economic situation. In conditions of transition to a market economy, the concept of vocational education itself must be reviewed and the experience of Soviet vocational schools re-examined.

It should be noted, at this point, that there are at least three fundamental differences between the initial vocational education and training system in Soviet society and the vocational education and training system emerging in contemporary Russia. These differences relate to the activity of educational institutions, the objectives of vocational education and training and management roles at different administrative levels (federal, regional and training institution)

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Changes in the activities of educational institutions centre round the ceding of state control over programmes to amalgamate vocational schools and plans to allocate school-leavers to enterprises. In the previous system, there were programmes which involved sending general secondary school-leavers to study at vocational schools. The implementation of these programmes was rigorously controlled by party and state organs. At the same time, vocational schools were obliged to place all their school-leavers in employment, in line with requests from enterprises which, in their turn, were obliged to take on to their payrolls a certain number of school-leavers from vocational schools. Relations between the schools and the enterprises were controlled by the state. These relations depended on the support of the enterprises, which were expected to reinforce the teaching methods used in the schools, to organise industrial experience for school-leavers and generally to act as part of the educational process, without any reward for their efforts.

The previous mechanism of state control of relations in initial vocational education is no longer in existence. Entry to study courses at these schools is freely available to school- leavers as they choose. The schools themselves must create conditions which are attractive to would-be applicants. The mechanism of compulsory allocation of school-leavers to vocational schools has disappeared. The schools must guarantee opportunities for placement in employment for their students or they will begin to lose recruits. To be able to offer this guarantee, the labour market must be analysed and the demands of future work providers must be taken into account. Otherwise, no partnership between the schools and the employers will be possible.

This necessity to adjust educational objectives to conditions of transition to a market economy was also addressed by the 1994 World Bank report 'Russia: Education in Transition'. The report noted that the professional future of the individual would be less structured in a market economy. Vocational students should not begin specialised training too early and must avoid the risk of becoming qualified in a specialisation which might not be in demand in a rapidly changing, unplanned economy. In a market economy, training institutions have to prepare students for what might be multiple changes in their area of specialisation and nurture in them an ability to adapt rapidly to new work practices and to perform a variety of roles and functions.

Although these conclusions were addressed to the higher education system, they are more properly the province of vocational education. Similarly, the report's conclusion that an economy which values vocational universalism and problem-solving abilities highly is not well served by traditional syllabi applied across all levels of education.

Moreover, another factor had to be borne in mind when vocational training objectives were being strengthened at teaching institution level and that is that initial vocational education and training institutions were, as in former times, the main players in the social protection of minors and, in particular, of adolescents belonging to 'risk groups'. The objectives of initial vocational education must not lose sight of the actual ability level of students and yet still guarantee a given level of education which will enable them to find employment.

Changes in the operation of vocational training institutions also led to changes in the nature of management activity. These changes focused, in particular, on the devolution of many management responsibilities to lower levels of management. There was now a need to develop vocational education within regional programmes and to restructure the programmes of specific vocational schools. The level of analytical input into this process, which was based on studies of the labour market and relevance assessments, enhanced the effectiveness and viability of the educational institutions and the regional educational systems. The vocational schools had to develop their own curricula and syllabi independently and, in so doing, took on increased responsibility for improving the qualification levels of their teaching staff.

Getting the project up and running was, in fact, an aid to solving the new problems in vocational educational development. Placements for managers and teachers from vocational schools involved in the project, 'horizontal seminars', consultations with foreign experts and experimental work in training institutions, all helped to stimulate new attitudes to problems in vocational education and to ways of resolving them.

The results of the pilot project were described in sector booklets, written by the Russian sector managers and based on the experience gained in implementing the project.

1. *Problems in Reforming the System of Initial Vocational Education in Russia*

The system of initial vocational education in Russia was set up in 1940. Millions of Russian workers and specialists passed through this system. The 4,050 functioning training institutions had, on 1 January 1998, a total of 1.7 million students with an annual output of around 800,000 qualified workers and specialists.

As part of the programme to reform the system of initial vocational education, the Russian Ministry of General and Vocational Education and the regional educational management authorities are actively involved in carrying out a reprofiling of individual schools and lyceums, amalgamating single-profile training institutions and expanding other institutions in order to maximise the use of available teaching resources. New schools are being opened and schools which have no role in the contemporary world are being closed. Individual training institutions are being integrated with secondary and higher training institutions. In 1997, 60 vocational schools and lyceums were reorganised, through amalgamation, merger or integration.

Significant successes were achieved in slowing down the rate of decline in the numbers of qualified workers and specialists being trained. In 1997, the output of qualified workers had been reduced by 21,700, including 12,100 day students, compared with 1996, i.e., by 2.6% and 1.8% respectively.

At the same time, there is an annual increase in the number of unemployed and non-working people undergoing training, retraining and courses to upgrade their qualifications, at their own expense or paid for by labour and employment authorities and employers, in the vocational lyceums and schools run by the Russian Ministry of Education (Minobrazovanie). In 1997, more than 220,000 people were trained, as against 9,000 in 1990. The initial vocational education system, which retrains non-working and unemployed, performs a valuable social role and also gets *additional financing*. These funds are virtually the *sole source* of funding for retraining and for the modernisation of teaching resources in initial vocational educational institutions, as, over the last five years, there has been no allocation for this from the federal budget.

In 1997, 65% of funds to finance the initial vocational education system were allocated from the federal budget for planned items while, for retraining the non-working population, the institutions received additional funding, amounting to 25% of the budget, from the Employment Fund and other extra-budgetary sources.

The take-up factor for places at initial vocational education and training institutions is 0.9. The quality and quantity of the network of initial vocational education and training institutions encourages the conclusion that this level of education can be made available to young people in Russia on a free and non-competitive basis.

Given sufficient funding, the intake levels of initial vocational education and training institutions could be substantially raised.

In 1997, 107 out of every 10,000 people in the Russian Federation were studying in initial vocational education institutions. In some regions, this figure was considerably higher: 143 in Perm Oblast, 142 in Vologda Oblast, 140 in Tomsk Oblast and 138 in Chelyabinsk Oblast. In other areas, however, it was very low. In the Republic of Ingushetia, for example, the figure was 38 and in Krasnodar krai, it was 57.

Since 1995, the situation regarding the placement of initial vocational education and training graduates in employment has improved. In 1997, the percentage of graduates unplaced due to lack of job vacancies had dropped to 15.7%, compared to 17.2% in 1995.

Unfortunately, hardly any funding has been allocated during the last four years to the organisation of the teaching process, and the effects of this can be seen in the deteriorating quality of initial vocational education. Though 20% of those leaving in 1997 achieved higher qualification levels, compared to 14% in 1990, the failure rate at the final exam had risen to 17%, compared to 3% in 1990.

1.1 *The policy on the reform of the initial vocational education and training system*

To ensure the smooth running of the initial vocational education and training system, the Ministry produced a policy for reforming the system, which was approved by the Government of Russia in June 1997. The policy document outlined the way the structure, content, special features and financing of the initial vocational education and training system and its scientific and regulatory and legislative framework would be reformed.

The policy has had a positive response from the overwhelming majority of people in the Russian Federation. Using it as a basis, the regions are developing or have developed their own programmes, strategies and plans for reforming and developing initial vocational education. Most of these have already been subjected to expert evaluation through meetings with a series of organisations and with administrative levels: labour and employment bodies; structural subdivisions in the regional administrations of the Russian Federation; employer organisations; heads of city and regional authorities; and education managers. Others are still going through this process.

The vocational education system can be described as performing three main roles through its constituent institutions: a socio-cultural educational role; an economic role; and a social protection role. It is quite difficult to define which of these roles is primary and which is secondary.

The initial vocational education and training system has a major economic role to play in the functioning of any state: the systematic provision of qualified labour resources. While this role is also performed by the two higher stages of the vocational education and training system, it is the particular importance of the initial stage to the economy that has to be stressed here, as two thirds of all those employed in the Russian economy are qualified to initial vocational level.

Given this function, the initial vocational education and training system must be viewed, not only as a component of social policy, but as a branch of the economy in its own right as well as a sector which underpins the efficient functioning of all other branches. Underestimation of the initial vocational education and training system, failure to pay it sufficient attention and, frequently, even failure to take it into account at all are, taken together, a major, albeit partial, reason for the need to implement economic reform in the country.

Throughout its entire existence, the initial vocational education and training education system and, prior to that, the labour reserve and industrial education system, was viewed as having one aim only: providing the national economy with the required labour force. Russia has now embarked on the path to democratic development, which involves attempting to provide for the normal human requirements of her people. A corollary of this is that the main objective of vocational education institutions has also undergone radical change.

Today, this objective is seen as satisfying the individual's requirements for vocational education services and, indirectly, satisfying the economy's labour force requirements. The style of management has also changed. It is no longer direct, non-consultative management as it was in the days of the Gosprofobra (State Committee for Vocational Education). Its remit, now, is to create conditions conducive to the efficient functioning and growth of educational institutions by involving other elements, which will directly influence the training institutions and will be in direct contact with industry, in the management of the system at regional and municipal levels.

The vocational education and training system, as a part of the economy, does not exist in isolation from the socio-economic system of Russia as a whole. The Russian economy is at present in serious crisis. Having regard to the acute problems that vocational education is likely to face in the future, it must be stressed that there is a need to move away, to a significant degree, from the traditional education system and from the direct authority of the Ministry of Education.

In the 1980s, the USSR implemented a programme to optimise the location of vocational schools, which led to them being centred on major enterprises. Both throughput of students and placements in employment were planned. This was a top-down system, which reached into the smallest towns and villages, with the authorities at the top distributing material, financial and labour resources.

Can any of this past experience be applied in today's conditions, where the forms of ownership and the nature of the relationship between the state and region have changed? Training forecasts, analyses and growth charts for vocational education and training institutions are needed now.

We consider, therefore, that serious efforts must be devoted to tackling the issue of forecasting qualified workforce and specialist needs at federal level, with regional and sectoral requirements being taken into account.

There is also a need to have some body take responsibility for formulating, on behalf of the vocational education and training system, specifications on how to predict employee and specialist training needs, both across the regions and within the trades and professions themselves. No one is filling this role at present. We believe that the Ministry of Economy, the Ministry of Labour and, most importantly, their offices in the regions should be responsible for forecasting future requirements even if only on a scenario basis. Lipetsk, Chelyabinsk and Yaroslavsk Oblasts and Khabarovsk krai already have experience of this.

It is not possible, however, for the state to require initial vocational education and training institutions to carry out training, based only on labour market requirements, as the initial vocational education and training system works with young people in an age group for which education is obligatory. State requirements, which may give due, even primary, importance to labour market requirements, are restricted by the obligation to provide education, at the requisite level, for 9th grade students entering vocational schools and lyceums.

If we continue along these axiomatic lines, we reach the inevitable conclusion that it is not possible to make economies within the initial vocational education and training system, as was once supposed, since any reduction in student places in the initial vocational education and training system would have to be compensated for by an equivalent increase in student places in 10th grade classes or by the creation of an equivalent number of 'outplacements' in corrective institutions run by the Ministry of Internal Affairs.

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1.2 *The structure of vocational training*

One of the major problems highlighted in the policy document on the reform of the initial vocational education and training system is the vocational qualifications structure of employee and specialist training. This is a problem which must be resolved as soon as possible. The structure of the trades and professions taught in schools and lyceums needs to be changed radically. Until now, up to 75% of those employed in the Russian economy worked in the manufacturing sector and this is reflected in the emphasis on certain subjects in our schools, since it is in manufacturing trades and professions that the bulk of school-leavers are trained. The re-profiling that is needed now requires major capital investment, as initial vocational education and training institutions are highly capital intensive.

However, notwithstanding the lack of funding, considerable effort is already being devoted to realigning the focus in training in favour of non-industrial subjects and scaling down the emphasis on defence-related and heavy industries. At present, the ratio is 76.2% to 23.8% compared to 89% and 11% respectively, at the end of the 1980s.

An answer must be found to the question of which trades and professions should now be re-profiled. In most cases, training institutions have a narrow-profile, sector-driven focus. Satisfying the individual's requirements for vocational education services demands that the list of vocational education syllabi offered be expanded. The lengthy courses traditionally offered by initial vocational education and training institutions (two, three or four years long) must also be abandoned. Training could be offered in two- or three-month courses depending on the level of vocational training required by the person looking for vocational education services.

A recent analysis of the labour market justifies these proposals. The analysis was conducted by educational institutions in North-West Russia and enabled significant new trends in the growth of various sectors of the economy to be identified. One such trend was the emergence of a large number of small and medium enterprises, often with fewer than ten employees. These enterprises need specialists who are *qualified in several trades or professions and a variety of skill areas.*

The curtailment of expenditure on vocational education has necessitated the reorientation of policy towards solutions which will help stabilise the situation and lead to further progress. A major element of this policy is the division of initial vocational education and training institutions into three groups: federal, federation and municipal levels.

At present, educational institutions can be classified into four groups, on the basis of ownership and source of financing:

- institutions which are federally owned and financed from federal appropriations;
- institutions which are owned by the Federation regions and financed from their appropriations;
- institutions which are federally owned and financed from the appropriations of the Federation regions; and
- institutions which are owned by the Federation regions and financed out of federal appropriations.

The grouping of initial vocational education and training institutions by major sources of financing and ownership will become increasingly significant as regional economies grow. At present, more than 40% of initial vocational education and training institutions are financed from the resources of Russian Federation regions. More than 12% (494 institutions) have been transferred to the ownership of seven regions.

The transfer of initial vocational education and training institutions to Russian Federation regions can take place only on the initiative of the Russian Federation regions and provided three conditions are fulfilled:

- the executive authority agrees;
- the legislative authority agrees; and
- the educational teams in the educational institutions agree.

Another significant trend in the development of initial vocational education is the transformation of some of the vocational schools into lyceums. A distinctive feature of lyceums is the priority they give to training for higher level qualifications. The lyceums also offer syllabi covering secondary-level vocational training. The creation of these lyceums has, on the whole, been met with approval. Another important development is that this process is not limited to the initial vocational education and training system: general, secondary and higher vocational schools are also changing their status to gymnasium, college, university or academy. There is now a difference in the types of trade or profession covered by schools and lyceums. Schools offer syllabi for the more broad-based trades and professions while lyceums offer more specialised education and training.

The intake going to different types of initial vocational education and training institutions tends to reflect the social, economic and ethnic features of the regions.

The provision of secondary-level vocational education in lyceums has given rise to some controversy. There are many who oppose this approach or who doubt its validity. Some have even suggested that it should be prohibited. Administrative solutions are not acceptable here. Experience indicates that lyceums provide training in secondary vocational education syllabi for only 5% of the total number of graduates of initial vocational education. This is in line with the regulation on initial vocational education and training institutions where provides for secondary vocational education syllabi to be used in vocational lyceums, in certain cases and where necessary. Lyceum graduates, who have followed secondary vocational education syllabi, are in demand with work providers and this is something that cannot be discounted.

However, the practice of implementing secondary vocational education syllabi in vocational lyceums contradicts the latest version of the federal education law which lays down that these syllabi can be followed only in secondary vocational training institutions. How can this be resolved? We would suggest that the future of vocational lyceums lies in the setting up of a new type of educational institution, based on the lyceum, which would run initial, secondary and, perhaps, first-level higher vocational education. Meanwhile, a whole raft of amendments is to be added to the education law. The Ministry has drawn up a draft plan for this kind of educational institution and a series of amendments to the education law has already been prepared. These will be discussed in the Duma once the agreements on the provision of this kind of educational institution are in place.

This new kind of educational institution will ensure that the principle of *adaptability* of vocational education syllabi at the different levels can be implemented. Moreover, where there has been a deterioration in living standards, the creation of these training institutions gives young people the opportunity to get vocational education at different levels close to home. It should also promote conditions which are less conducive to crime (minors will study under parental supervision) and to reductions in the cost of training for the state and for parents (accommodation, subsistence, travel costs etc.).

1.3 *Educational standards*

Contemporary socio-economic conditions impose new demands on the content of vocational education. New contents are being developed by re-working the State Standards in conformity with the provisions of the Russian Federation law on education. The standards should be drawn up in line with a new list of trades and professions ratified by the Russian Federation Government in 1994 and containing 257 integrated trades and professions. (There were 1,200 in the old list.)

The application of the previous mechanism for standards development was spread out over time: 137 standards were approved in a period of 5 years and 25 are still under review at the Ministry of Education. The Institute for the Development of Vocational Education, which is concerned with standards, has inadequate funding and its staff resources are limited. It has become necessary to involve additional structures in this process. The initial vocational education and training system has a network of methodological centres, with dedicated classrooms and units, and these have a certain amount of experience in developing syllabi and producing the requisite documentation. The Ministry has amalgamated regional methodological services and profiling associations and set up Educational Methodology Centres to develop standards for core trades and professions and the methodology for applying them.

These Educational Methodology Centres are supposed to work closely with major enterprises, labour and employment agencies, employer associations and trades unions, all of whom will be able to participate in the development and review of documentation.

Another significant step forward in the reform of the content of initial vocational education was the transition to a unified educational programme for (full) secondary general and initial vocational education based on the general education system of nine years plus three years of training.

To date, these have been implemented in parallel in initial vocational education and training institutions. They will now be combined so that the diploma awarded to graduates from the initial vocational education and training system is, of itself, proof that they have obtained initial vocational education incorporating work-oriented general secondary education. The content of the syllabi and textbooks has still to be revised, with a view to removing unnecessarily complicated material and bringing methods and teaching resources up to date. In short, there have been improvements in the quality of teaching. There will also be improvements in the career guidance system, with people being able to take decisions on what kind of work they would like to do in the future.

Another major task is the preparation of a new list of trades and professions, for which training can be had in the initial vocational training system, with additions and amendments, for submission to the Russian Federation Government for ratification.

It is expected that a government decree will be passed by the Ministry of Education and the executive authorities of Russian Federation regions on the implementation of the experimental plan for 1998-2001 to develop a regional model for restructuring the structure and content of the initial vocational education system.

Education as a whole, and initial vocational education in particular, can and must become a touchstone for economic, political and social stability in society, underpinned by three basic principles: quality, accessibility and mobility.

1.4 Significance of the pilot project for reforming and developing the vocational education system

The pilot project on Vocational Education and Training Reform in North-Western Russia has an important role to play in the development of the vocational education system. The ideas behind the project correspond to the main provisions of the policy document on the reform of the initial vocational education system in Russia. The main thrusts of the pilot project, such as labour market assessments and the development of cooperation between the social partners and the work providers, are of prime importance. As there are more people available for work than places to be filled, it is quite difficult to persuade employers to engage with the problems of vocational education and to invest in its activities. The experience of implementing the pilot project throws some light on what can be done to help resolve this particular problem.

The project is also of major significance as far as the practical approaches adopted to reform and modernise the content of vocational education are concerned. Both initial and secondary vocational education and training institutions are involved in the project. Through this cooperation, a solution can be found to the problem of adaptability of vocational education and training syllabi, which was discussed earlier.

The experience of reforming initial vocational education and training institutions gained during the implementation of the pilot project can be widely used throughout all the regions of Russia.

2. The Labour Market and the Social Partners

Issues such as the study of the labour market and relations between the social partners have been of central concern to the Pilot Project on Vocational Education and Training Reform in North-Western Russia. They were the main topics of discussion at a series of meetings between project stakeholders and at the horizontal workshops on Labour Market Assessment and Social Partnership in Vocational Education and Training.

The industry and service sectors are the main customers for the output of vocational education institutions. Vocational education must meet the needs of the labour market for specialists and there is, therefore, a need for ongoing analysis of the market in labour resources.

Trends in industrial development have a huge impact on the objectives of the vocational education system. Educational services grow and develop to meet a specific region's needs for workers who are suitably qualified and trained in a particular specialisation.

Socio-economic changes in society also have an effect on vocational education as they determine priorities and the required level of specialist qualifications. The corollary of this is that the labour market assessment of a particular region should be based on identifying both the needs of the labour market in various vocational spheres and the level of qualifications required by employers.

2.1 Labour market assessment (LMA) procedure

A procedure for monitoring the labour market and a plan for analysing the requirements of enterprises in the region were worked out with the foreign partners. There were three main elements in the study of the labour market:

- assessing the economic situation;

- forecasting the development of a specific industrial sector; and
- assessing and forecasting increases in unemployment and skill shortages in the labour force.

The sectoral workshops on labour market assessment were preceded by a horizontal seminar, organised by the Centre for Strategic Analysis of Social Processes and EU experts. The aim of the workshops was to motivate the stakeholders in the project to cooperate with the various social partners and to help the pilot schools to study procedures for labour market analysis. The seminar defined the pedagogical, methodological and practical objectives of research into the training and job placement of employees in the context of labour market needs. The workshop participants were introduced to practical labour market research methods and were given experience of using questionnaires, interview techniques and social observation.

The majority of the enterprises reacted positively to the idea of taking part in reviewing, amending and developing the content of vocational education. The enterprises that declined to cooperate argued that they based their decision on the unstable economic situation and the consequent uncertainty in job opportunities.

Using a specially prepared questionnaire, the sectoral workshops adapted the proposed model of labour market research to actual conditions in the labour market, adjusted for each sector.

To carry out the labour market assessment, each region, with the aid of the foreign partners, drafted a questionnaire suited to the vocational areas covered by the sector. Using this questionnaire (examples are given in the sectoral booklets) interviews were held with the administrations of many enterprises and their specialists. The research made it possible to measure the willingness of employers to cooperate with the educational institutions and the actual demand for employees. The information gained in interviews helped to identify the profile of specialisations demanded in today's market and, subsequently, led to the development and introduction of new specialisations in the curricula.

The qualification requirements put forward by the employers do not quite fit the qualification levels currently offered by vocational schools. In particular, employers expect employees to have a higher level of knowledge, skills and abilities, and greater skill diversity, than workers with vocational or general qualifications. As regards the level of practical knowledge of staff in the enterprises studied, the results of questionnaire indicated that there are employees with suitable qualifications but that they need to undertake continuous professional development and update their qualifications constantly. Moreover, most industrial enterprises have a surplus of engineers who are engaged in work which could be done by less qualified people.

2.2 *Results of the labour market assessment*

As a result of the work carried out by the project participants, regional demand for employees trained in a training institution was assessed, categories of employees perceived as being in short supply by the employers were identified and specialisations which ought to be taught were defined. Employer requirements when hiring staff were assessed and information was assembled so that curricula and syllabi could be modified.

The collaboration between the educational institutions, employment services and employers in this study of the market, convinced each of them of the necessity of having consultative committees as a tangible means of maintaining regular collaboration in the sphere of vocational education.

Once the consultative committees were set up in each region, the research into the labour market was continued, with the committees, one of whose main functions is coordination between the training institutions and the social partners, coordinating the activity of the various bodies involved.

The concept of '*social partnership in vocational education*' is defined as the participation of various organisations and private individuals in joint activity aimed at framing a contemporary approach to vocational education. Cooperation between the training institutions and social partners has become more important, as the former has to take into account the requirements of the labour market to achieve qualitative goals in planning the teaching process and the latter is particularly interested in improvir ʒ the quality of vocational education.

International experience in this area indicates that the social partners interested in vocational education and training, are the same in Europe as they are in Russia:

- representatives of the economic ministries;
- employment services;
- education management bodies;
- various types of enterprises; and
- employers' associations, trades unions and representatives of other training institutions.

In today's economic conditions, a new trend can be seen in the development of social partnership. The *education sector* now needs to take the initiative by joining forces with enterprises, companies and related associations and by coordinating opportunities for reaching common objectives.

In the present situation in Russia, no partnership has yet evolved between the training institutions, enterprises, local administrations and employment services. Drawing on foreign experience of social partnership, the Russian participants in the project have decided to set up consultative committees in order to coordinate activity between the training institutions and possible social partners.

The consultative committee is a body comprising representatives of all the social partners of vocational education institutions. The main aim of setting up consultative committees is to develop and improve the vocational education system in contemporary economic conditions. The main objective of the consultative committees is to develop proposals on the provision of training, in the light of forecasts and analysis of the labour market and to put forward proposals on how to shape a national qualification structure.

Consultative committees were set up at various levels:

- at municipal level – under the Education Committee, as in the Novgorod Oblast;
- at individual branch of industry level, as in St Petersburg (tourism sector); and
- at the level of the individual vocational school, as in Petrozavodsk (wood production and processing sector).

The consultative committees will continue to function, since, during the lifetime of the project, they have shown themselves to be one of the most useful tools for ensuring cooperation between the stakeholders in vocational education.

Within the framework of the project, there was active collaboration between the training institutions and the following social partners:

- education authorities;
- industry management bodies;
- labour and employment authorities; and
- other educational institutions and employers.

The main social partner of a vocational school is the *enterprise* since it is a potential source of employment for graduates, provided they can offer a suitable level of qualification and there is coordination at the training stage. In the ongoing relationship *between enterprise and teaching institution*, the primary objective is the provision of a suitable level of specialist training to meet labour market demands. Based on the experience of foreign colleagues, and on the results of questionnaires and interviews with enterprises, the training institutions taking part in the project worked out a best model for joint action with employers and educational institutions. They identified certain areas as targets for cooperation, including:

- designing of tailor-made training of employees, in line with a profile which meets the requirements of the labour market;
- participation of employees from enterprises in the development of curricula and syllabi;
- participation of enterprises in the teaching process as invited lecturers and members of examination and qualification boards;
- offering students industrial experience placements and organising short in-service courses at enterprises for teachers;
- participating in the work of the consultative committees and in labour market research;
- organisation by training institutions of in-service training courses for enterprise employees; and
- joint advertising of the activities of the enterprise and the training institution.

2.3 *Development of new partnerships as a result of the labour market assessment*

In all sectors, the regional *education authorities* were involved in the consultative committees. They are in a position to influence state policy on vocational education by developing standards which meet market requirements and current qualification specifications. Round tables to discuss the planning and organisation of vocational training were organised jointly with the regional education authorities for potential social partners. One result of this activity was a growing interest among enterprise and industry representatives in the dialogue on vocational education.

The links between training institutions and *labour and employment* authorities are getting stronger but they are still mostly at the personal contact level. The positive experience of cooperation with the Employment Service grew out of the joint study and analysis of the labour market and the forecasting of enterprise requirements. The use of vocational educational institutions to retrain the unemployed and organise in-service training for employees is an effective form of cooperation at this level.

One of the main forms of cooperation between the training institutions and economic committees is the drafting of regulatory documents encouraging industry to cooperate with vocational education, and involving the educational institutions in cooperation with industry through joint conferences, meetings and exhibitions.

The parties have also recognised the need to collaborate on the content and methodology of relations with and between *other educational institutions*. The positive experience gained in the wood production and processing sector, where a system of continuous vocational education was set up in Karelia, is particularly noteworthy in this respect. An educational complex, combining general, secondary, initial and higher vocational education, called Tekhnologiya, has been set up under the aegis of the Pedagogical University.

2.4 *Difficulties arising during the labour market assessment*

Studying labour market requirements is, for the training institutions, a new area of activity. This work is at the initial stage of development and is focusing on surmounting such difficulties as lack of information, the huge volume of work involved and the failure of some of the industrial representatives to recognise the importance of this kind of research.

The training institutions encountered some problems in establishing links and in working with the social partners. The lack of a regulatory framework on which to construct the growing cooperation between educational institutions and various categories of social partners as a whole and the lack of motivation to cooperate on the part of some of the partners were a particular problem.

One of the major problems is the inconsistency of state educational standards with the needs and requirements of the market and the applicability of modern teaching and learning methods to existing standards. Most enterprises are keen to establish individual contacts with training institutions but, at the federal level, there are no laws or regulations, which would motivate the industrial representatives to cooperate actively with the vocational education system. Neither do enterprises have the skills to predict staffing policy and they find it difficult, in unstable economic conditions, to define their requirements.

The Ministries of Labour and Employment and the regional employment services do not work closely enough with the local education management authorities in the development of qualification standards or in predicting labour market requirements and retraining the unemployed.

The lack of adaptability between the educational standards of different levels of vocational education gives rise to difficulties in the creation of a continuing vocational education system.

Despite these difficulties, we can begin to see the first fruits of our labours. Pilot training institutions have recognised the need for constant study of the labour market and have evolved a procedure for assessing it. Thanks to the project, the training institutions have established new links, and reinforced existing ones, with enterprises and social partners, who, in turn, have developed positive attitudes to cooperation with vocational schools. In the next stage of the project, the links established will have to be reinforced and broadened, with greater focus placed on solving the problems which have arisen. The consultative committees responsible for coordinating links between vocational schools and the social partners have begun their work. Within this framework, closer links have been established between industrial management bodies and labour and employment authorities.

The first results from the labour market assessment have already been incorporated into new and modified educational standards, curricula and syllabi.

The system for studying the labour market, developed during the pilot project, can be used by different kinds of vocational training institutions. The key stages in the process have already been identified, drawing on the experience of pilot schools in the tourism sector.

2.4.1 *Work plan of the pilot schools in the tourism sector*

Autumn 1996, Preliminary labour market assessment

The preliminary research into the labour market comprised interviews with employers, using questionnaires drawn up in advance. The interviews were conducted at the workplace of potential customers (in tourist companies, hotels and public catering establishments) and with those taking part in an international tourism fair. The aim of the research was:

- to identify the willingness of employers to cooperate with educational institutions in further research on the labour market;

- to identify staffing requirements of employers;
- to identify qualification requirements for employees; and
- to identify the readiness of the educational institutions to carry out this work.

Around 40 tourist and catering enterprises were interviewed. It was found that the requirements for employees were not clearly formulated. It was also found that knowledge of foreign languages, especially English, a high level of cultural knowledge, good presentation and office skills and specialised vocational knowledge and skills were among the main requirements for employees.

This work was of particular importance to the project, as it marked the beginning of a collaboration and partnership with representatives of the tourist industry.

Spring 1997, Seminar on labour market assessment

Representatives of the training institutions, education and employment authorities and enterprises attended this seminar which was organised, as part of the pilot project, by the Centre for Strategic Analysis of Social Processes, in cooperation with EU experts.

Representatives from all sectors attended this horizontal seminar, the main goals of which were:

- to motivate the project participants to cooperate with the various social partners; and
- to analyse and apply the proposed labour market assessment methods.

The seminar participants were invited to survey 18 different enterprises in St Petersburg and the agreed method was used in the interviews. Enterprise representatives expressed an interest in hiring highly qualified employees. The main qualifications sought for the tourism sector were:

- specific knowledge, skills and practices in particular occupational areas;
- a knowledge of English, familiarity with specialised tourism software, communications skills, sales technologies and office technologies;
- practical work experience in tourism; and
- a responsible attitude to work, punctuality and company loyalty.

Almost 80% of the enterprises responded favourably to the idea of taking part in the review, amendment and development of the content of vocational training. Overall, the seminar can be considered as successful.

Spring-Summer 1997, Research on tourism as a product in the North-West region of the Russian Federation

This research covered cultural and entertainment establishments, catering enterprises and the hotel industry. Emphasis was laid on contemporary information sources such as printed references, electronic information systems, information bureaux and agencies. Information was collected on tourism products on the market. Cultural aspects of tourism, environment and climate, accommodation and catering were all examined.

Pedagogical staff and students from the pilot schools carried out this research. Reports were produced in Russian and English. The research was used as a basis for subsequent stages in the labour market assessment.

Spring-Summer 1997, Research on the market for training in tourism services in the North-Western regions of the Russian Federation

The pilot schools conducted stocktaking of educational institutions, at various educational levels, which trained employees for the tourism industry. A list of available training courses was drawn up and an analysis was made of how well the training provided matched the tourism product in the region.

This research was also used as a basis for subsequent stages in the labour market assessment.

Autumn 1997, Sectoral workshop on labour market assessment

This three-day workshop was targeted at adapting the proposed theoretical model of labour market assessment to the actual situation in the tourism sector in the Russian labour market. There was an equal number of participants from the pilot schools and the tourism industry. Different areas of the tourism industry in St Petersburg, Vyborg and Novgorod were represented (tourism companies, hotels and restaurants). One result of this participation was that the seminar led, some time later, to the establishment of a consultative committee for the tourism sector. The work of the seminar was divided into the following themes:

- theoretical model for labour market assessment;
- analysis of demand and supply;
- cooperation between training institutions, enterprises and intermediary organisations;
- adapting the theoretical model to the Russian situation; and
- drawing up an action plan for implementing the labour market assessment.

EU partners described international experience in researching the labour market in tourism and strategies for cooperation between industry and education. The first day was devoted to the experience of foreign partners. On the second and third days, the participants conducted a labour market analysis, using material from previous research and, in four groups, worked out their own plans for conducting a labour market assessment. The results produced by the four groups were later combined into three projects.

January 1998, Study visit to the Netherlands

Russian specialists were familiarised with the problems in organising joint activities between industrial enterprises, training institutions and administrative bodies. Real problems, which had emerged while organising this type of cooperation, were described and ways and means of resolving them discussed.

Autumn 1997-Spring 1998, Researching the labour market within the framework of the consultative committee

A consultative committee was set up during the project. One of its functions is to carry out regular labour market assessments. It also became involved in the TACIS programme, 'Strengthening Training for Tourism'. Detailed research of the labour market in the tourism sector, in St Petersburg and other regions of Russia, was carried out within the framework of this all-Russian project. The results were submitted to the consultative committee where they were discussed and assessed by two working groups within the committee (tourism and hotel and catering).

The following conclusions and outcomes emerged from the work on labour market assessment carried out within the framework of the project:

- pilot schools have recognised the need to research the labour market;

- pilot schools are familiar with the methods of assessing the labour market and have recognised that such labour-intensive work cannot be carried out alone and that there has to be cooperation with other training institutions, industry representatives and other social partners;
- links with representatives from industry have been established, common ground has been found and a good foundation has been laid for future cooperation;
- contacts have been established with tourism management authorities in St Petersburg, Leningrad Oblast and Novgorod;
- the consultative committee has been set up;
- contacts have been established with the TACIS project, with a view to jointly resolving problems in researching the labour market; and
- work has begun on the labour market assessment and the results will be reflected in new standards, curricula and syllabi.

Even though these positive outcomes have been achieved, we are keenly aware that work in this area is still at the initial development stage. The pilot schools still have many obstacles to overcome:

- a lack of information about this subject;
- a heavy work load; and
- a failure to understand the importance of this subject by some of the industry representatives etc.

In their ongoing work in this area, the pilot schools hope to overcome these difficulties and achieve the following objectives:

- to design tests to identify the competencies and qualifications that school leavers need and agree these with employers;
- to study the correlation between current qualification requirements and labour market demands;
- to develop standards for tourist services;
- to analyse the labour market in Novgorod and Novgorod Oblast, Vyborg, St Petersburg etc., and to put forward specific conclusions, based on the results of the analysis, on the positive and negative consequences of present training provision and on the number of employees needed in particular areas; and
- to work out, together with tourism and hotel enterprises, qualification requirements for trades and professions in the tourism and hotel sectors (reception managers dispatch managers, group leaders, tour leaders etc.).

These difficulties can all be resolved if the administrative authorities or industrial enterprises interested in achieving these results are encouraged to contribute extra financial resources. In some enterprises, this work can be carried out by individual training institutions but activities such as in-depth analyses, assessment of the situation in the tourist industry and the forecasting of long-term job trends can be tackled only if an integrated approach is adopted and management is centralised. The development of qualification requirements in cooperation with industrial enterprises requires additional financing. Alternatively, cooperation could be required by the administration or by law (a negative option, as 'forced labour' is rarely well done). In any event, instructions on how to draw qualification requirements need to be provided.

3. *Reforming the Content of Vocational Education*

Reform of the content of teaching in vocational educational institutions at initial and secondary levels is the principal objective of the project. Achieving it depends on the following types of activity:

- researching the labour market, developing cooperation with the social partners and identifying requirements for vocational and general education for those graduating from vocational training institutions;
- studying foreign experience (study tours, seminars, study of teaching and methodological material, discussions and conversations with foreign colleagues); and
- exchange of experience between Russian partners in the project.

3.1 *Foreign experience*

During the project the experience of various EU countries that have a well-developed system of vocational education and training, including Germany, Finland, the Netherlands and Belgium (Flanders), was studied. It was evident that there were significant differences in the way vocational education is organised in these countries. These differences are due, largely, to their histories and cultural traditions. However, an overall trend, common to all modern, foreign, educational institutions could be identified: the teaching process has been constructed in line with a new philosophy in education, characteristic of a new stage in the development of society and typified by the adjective 'information' as opposed to 'industrial'.

Table 2
Tenets of 'old' and 'new' philosophies of education

Main tenets of the 'old' philosophy of education	Main tenets of the 'new' philosophy of education
1. The teacher (imparter) was the main actor in the teaching process. The teaching process was organised around the teacher who was the main source of information (knowledge).	1. The student (participant) is the main actor in the teaching process. The teaching process is organised around the student. The teacher's role has changed: instead of performing the old role as main source of knowledge, the teacher is becoming more and more of an organiser, helping the student acquire knowledge from different information sources. This new type of teacher needs more than good professional knowledge: s/he needs to be well and widely informed, to have a good understanding of information and communications and to be able to motivate students. The teaching process is now organised in such a way that it can respond to the needs of various categories of student and focus more on the development of various types of instruction and independent student study.

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Main tenets of the 'old' philosophy of education	Main tenets of the 'new' philosophy of education
2. The content of the teaching process was shared among different disciplines which were studied separately, even though they had subject areas in common. Teachers of disciplines with closely connected subject matter worked in groups (method committees).	2. The teaching process is interdisciplinary in nature. Modular teaching has been introduced. The core of each module focuses on a real problem which itself is always interdisciplinary in nature. The module includes applied disciplines which can help solve that particular problem. The teachers of the disciplines covered in the module work in a single team. They develop the content of the module together, plan out the teaching process and prepare the teaching material.
3. Education was targeted at aims reflecting the structure and content of the disciplines taught.	3. Education is targeted at employers' requirements. There is cooperation with industry within the framework of the teaching process. Curricula and syllabi are reviewed with representatives from industry and the labour market is researched.
4. The teaching process was targeted at ensuring that students acquired a certain body of knowledge, know-how and skills in a specific field.	4. The teaching process is targeted at encouraging the students to learn for themselves, within the teaching process, how to acquire the necessary knowledge and information. Key know-how and skills are now: an aptitude for personal study and training and an ability to adapt rapidly to changing economic conditions, to engage in team work, cooperation etc. A main core of disciplines has been identified within the teaching process - communication skills, foreign languages, information technology - and this core is studied both as a separate module and as part of other vocational modules.

As a result of the study of foreign experience, the participants in the project were able to highlight certain *dominant* features of the European vocational educational system, which could be applied to the Russian system.

1. There is harmonisation at all stages of education, a smooth transfer from one stage to the next and an adaptability of educational content within the entire teaching process, both generally and within individual subjects.
2. There is a clear-cut boundary between the various levels of educational content and a clear delineation of final qualifications obtained by school-leavers at each level.
3. There are moves to bring the content of vocational training programmes in certain trades and professions in different countries into line with general European educational standards and qualifications. This should broaden the labour market, increase employability and make it easier to find work placements during training, since work providers in different countries would have a clear idea of what the holder of a particular diploma could do, and where.
4. Students have a free and informed choice of trade or profession and specialisation, and can choose for themselves both the duration and level of their own education. Students can, depending on their own aptitudes, inclinations and ambitions, leave school at any stage and be sure of getting a certificate showing they have reached a certain educational and vocational level.

5. There are opportunities to pursue continuous training and retraining in a chosen specialisation throughout the whole of one's professional career (lifelong learning).
6. There is an emphasis on the practical application of vocational education, with a lot of hours devoted to practical training and varied types of practical experience. There are close links with theoretical training.
7. There is a lot of training in problem-solving, using a number or a combination of different subjects and based on the idea that any discipline can be used to solve practical tasks arising from specific problems in a given sector.
8. Students in vocational schools can learn several foreign languages.
9. A high priority is given to nurturing psychological motivation in students, with students recognising that their work is important and needed.
10. In order to help develop professional psychological attitudes for work with customers, students learn to work with real customers, even at the initial vocational education and training stage.
11. Students work in close contact with local companies and national professional and trade organisations which can help to arrange work experience. They also take part in the process of consultation on training content and make recommendations on amendments to curricula and syllabi.
12. Equipment and technical resources in vocational schools are up-to-date, enabling a good basis to be built up for work experience and good basic skills to be put in place from the very beginning of training.

The implementation of the pilot project was of great interest to the heads of a variety of educational institutions, including some who did not participate in the project, and stimulated them to conduct their own study of vocational education in European countries. This group of specialists was interested in the most outstanding feature of European vocational education: the highly-developed system of independent certification of students, which is the basis of the qualification structure, with its clearly delineated requirements for particular levels of vocational training. An example of particular interest is the British qualification system, which has its roots in the 17th century, when the seeds of the modern vocational certification structures were sown.

3.2 *The Russian experience*

While it would not have been realistic to expect global changes in the organisation and content of the teaching process during the first phase of the project, the pilot schools were nonetheless able to achieve very positive results.

The work on reforming the content of the teaching process in each of the sectors had its own specific characteristics and highlighted the distinctive characteristics of each sector. Some general tendencies can, however, be described.

3.2.1 *Educational standards*

The drafting of new educational standards was heavily dependent on the labour market research and the framing of vocational standards. Each sector chose its own approach to the work on educational standards, depending on the outcomes of the labour market research. The tourism sector had an innovative approach which involved the drafting of new standards at initial and

secondary vocational education and training levels. New trades, professions and specialisations such as 'hotel industry employee' (initial vocational education and training) and 'tourism' (secondary vocational education and training) were added to the federal classification list. The standards were approved by the Ministry of General and Vocational Education of the Russian Federation in cooperation with the Ministry of Labour. Other sectors worked within the framework of existing educational standards, but amended the vocational qualification requirements for different types of employee.

3.2.2 *Curricula*

In all sectors, curricula were rewritten in response to the labour market research. These new curricula form the platform for vocational standards and employers' requirements. Multi-level curricula were also tried out in all sectors. However, progress here was, unfortunately, hampered by the fact that there is no coordination of educational standards by the Ministry of General and Vocational Education of the Russian Federation, and no progression or linkage between the standards at the different educational levels.

Major structural changes, based on specific developments in the economic sectors involved, were introduced into the curricula.

Tourism sector

- New specialist subjects were introduced:
  - presentation skills;
  - intercultural relations;
  - foreign language;
  - package tourism;
  - hospitality management;
  - information technology for tourism etc.
- A study block of psychology disciplines was introduced, aimed at giving students an insight into employee conditions and management practices in the tourism industry. This study block included management psychology, conflict management, socio-psychological training etc.
- The system for acquiring foreign languages was amended and a second language was introduced into courses for a range of specialisations.
- The content and form of overall certification were changed. Many educational institutions moved away from the state qualification examination system and introduced diploma work for virtually all significant targets.
- Curricula were amended for specialisations in Management in the Tourist Industry, Organisation of Services in Hotels and Tourist Centres, Catering Technology etc.

Telecommunications sector

As a result of the labour market analysis, the Technology and Economics College at the University of Novgorod introduced a basic specialisation for secondary vocational education and training in telecommunication networks and switching systems. The national standard for this specialisation allowed the teaching process to be planned with a fair amount of freedom. The subjects to be taught were mapped out in a way which would allow methods used in Finland and Germany to be adopted

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Wood processing sector

The pilot schools drew up new curricula for the trades of Carpentry, Master Craftsman in Furniture Manufacture and Wood Artist, for which three- and four-year courses are offered. The new curricula allow for staged certification, with an appropriate level of qualification being acquired at each stage in the training. The curriculum for timber technology went through major amendments and new subjects were introduced, such as Standardisation, Metrology and Product Certification, Health and Safety at Work etc.

Syllabi

The pilot schools drafted a whole range of new syllabi and amended existing ones, and laid particular stress on the following features: an increase in the time devoted to practical training within theoretical subjects, drawing up new forms of certification, and supporting students in independent and individual study.

3.2.4 *Teaching methods (training technologies)*

The pilot schools began to introduce new teaching methods such as role-play, problem solving, modular training and other key training methods.

3.2.5 *Practical training*

To supplement traditional training workshops, the pilot schools set up training firms, enabling the students to acquire professional skills in conditions resembling real market conditions as closely as possible. After two years of running the project, there have been significant advances in arranging practical training in real industrial situations.

3.2.6 *Teaching aids and resources for the teaching process*

The pilot schools carried out stocktaking of existing teaching aids for the various specialisations. Attempts were made to arrange ongoing cooperation by setting up a system for providing the various trades and specialisations with teaching aids and materials. Unfortunately, a large number of schools ran up against problems here, which are insurmountable in the current financial and economic situation. Attempts were made to study what assistance the foreign partners could offer to help overcome these problems.

3.2.7 *Computer-based training*

Research into the problems of reforming the content and technologies of vocational education in the telecommunications sector pointed to the need to allow for the impact of the teaching medium on the education process.

Enhancing the impact of the teaching environment on training can be achieved primarily through the introduction of computers. There are two important aspects to the penetration of current and future computer-based information technologies into the teaching process. The efficiency of acquiring traditional and new knowledge is improved and the trainee acquires an information culture, which is necessary for both work and day-to-day living in the new information society. Computer-based training, consequently, has a significant impact on the shaping of different types of technologies used in professional activities.

Targets for the use of computer-based training as a platform for creating systems in vocational training were set on the basis of an analysis of the process of bringing IT into vocational education and of the general trends in the socio-economic development of society.

In general, these inter-linked targets can be described as follows.

1. Computer-based training should be available, in line with the growth of the information society. It should introduce the students to the information medium used in their prospective professional activity. In particular, computer-based training should contain modules which train students in the information systems used in hi-tech production and information services.
2. Computer-based training should enable the students to become familiar with the information technologies used by those who will be providing 'information self-service' in their future career.
3. Computer-based training should give the students professional mobility, allowing them to take advantage of opportunities on the labour market, e.g., by giving them access to more interesting vacancies as requirements for the level and standard of vocational training change etc.
4. Computer-based training should present the students with examples of multiple uses of computers in the teaching process.
5. Computer-based training should support structural expansion in several ways:
   - through the organisation of 'home' training with a computer;
   - by promoting the use of communications tools by students in problem-solving;
   - through the development and implementation of new computer-based training components in extra-curricular time; and
   - through teaching the students a range of personal information applications for their future careers.

The pilot schools carried out a major study of foreign experience in vocational training in four economic sectors and then adapted that experience to Russian conditions. The training institutions experienced certain difficulties in this, difficulties that are unavoidable when such a complex task as the reform of the vocational education and training system is being undertaken. The main difficulties can be grouped as follows:

- insufficient technical resources;
- lack of teaching aids;
- difficulties in adapting foreign experience to Russian conditions, as some European experience was not compatible with the requirements of Russian educational standards;
- difficulty in motivating partners in the project; and
- psychological problems (the difficulty of bringing about the necessary change in the whole approach to vocational education and training).

3.3 *Outlook for the development of the next stage of the project*

Based on the experienced gained from the pilot project and an analysis of the content of the teaching process at present, we would recommend the following as future priorities for the project:

- changing the administrative structure of training institutions to ensure the integrity and effectiveness of the teaching process and integrating practical work and theory and methodological and educational work into a single whole;
- developing new educational standards for a range of vocational targets to harmonise initial, secondary and higher levels of vocational education and the requirements of professional (occupational) standards;
- setting up integrated teaching resources for the various specialisations;
- designing curricula for evening classes, distance and remote learning courses, qualification improvement courses and retraining for adults, based upon the requirements of the labour market;
- introducing new certification and training methods for the various categories of student; and
- creating information and resource centres based on the pilot schools.

4. *Upgrading the Qualifications of Teaching Staff - Training the Teaching Staff in New Curricula and Syllabi*

The problem of upgrading the qualifications of the teaching staff in the vocational education and training system is closely linked to the basic training for lecturers and industrial instructors. There follows a brief description of the main principles underlying the organisation and content of this training.

Russia has at present two higher education institutions specialising in training engineering teachers for the initial vocational education and training system. One is the Urals Vocational Pedagogical University and the other is Nizhegorod Engineering Pedagogical Institute.

In the secondary vocational education and training system, training instructors are trained at specialised, industrial pedagogical institutes (tekhnikums or colleges) such as the Petrovsky Industrial Pedagogical College in St Petersburg.

Thousands of teachers and training instructors are currently employed in the initial vocational education and training system in Russia. In St Petersburg, the total number of teachers (excluding managers and sports teachers) and training instructors (including senior foremen) in initial vocational education and training institutions, at 1 September 1997, was 3,923. This was made up of 1,036 teachers of general subjects (26% of the total), 568 teachers of general technical and special subjects (14%), 2,212 training instructors (56%) and 105 senior foremen (2.7%). Of the total number of teachers and training instructors, 95.4% of the teachers and 27.7% of training instructors have higher education diplomas, while 56.5% of the teachers of general technical and special subjects and 61.8% of the training instructors have more than five years experience of working in schools.

There are no special requirements for hiring teachers and training instructors and, frequently, they have not had any pedagogical training in teaching or educational psychology.

Under Russian Federation law, every employee has the right, once every five years, to take a year-long sabbatical from work in order to follow a course to upgrade his/her qualifications. This 'qualification upgrade rule' for engineering teaching staff applies, as a rule, in state educational institutions for further adult education. These institutes (faculties or centres) for upgrading qualifications exist in virtually all regions. The Institute for Improvement of Qualifications of Employees in the Initial Vocational Education System in St Petersburg acts as the central institute. The duration of a standard (obligatory) training course in the qualification upgrade system is a minimum of 72 hours. A national certificate is awarded at the end of the course. An analysis of the reasons teaching staff take qualification upgrade courses showed that, in many cases, these were external, often negative, reasons linked in one way or another to some kind of administrative requirement or commercial or narrowly self-interested consideration.

A desire for more educational creativity is the most popular motivation for teachers to seek to enhance their teaching environment. Taking this as the prime motive, we can identify five types of teacher (cf. Table 3).

Table 3
Motivation among teachers to develop educational procedures (350 respondents)

Prime motive	Number of respondents (%)
1. Not satisfied with existing methods. Trying to improve own work conditions	54.7
2. Commercial considerations connected with possible enhancement of status or future certification	19.8
3. Prestige (feeling of professional worth)	17.0
4. Intellectual self-fulfilment	5.3
5. Social significance of innovative activity	3.2

(From a research paper by D. G. Levites)

Research on ways to improve the effectiveness of the teaching process, focusing on the use of teaching resources and conditions for their improvement, has shown that there is a range of difficulties whose solution depends directly on the professional attitudes and methodological competence of the teacher. The overwhelming majority (80%) of teachers responding to the survey thought that their professional level was high or higher than average and based this conclusion on how effective their use of the reproduction method (ability to expound material accessibly and monitor its assimilation) was. A much smaller percentage of teachers gave themselves a high rating on such professional qualities as the ability to establish the necessary contact with students (55%), the ability to keep students interested in their subject (25%) and a knowledge of new teaching ideas and resources (13%). On the issue of the teaching technologies and resources actually used, up to 60% admitted to being unclear about the question with some not understanding the essence of it at all.

The analysis of the requirements of employees in initial and secondary vocational education and training institutions, carried out during the pilot project, revealed a wide range of teaching trends and attitudes in the area of qualification improvement (cf. Table 4).

Table 4
Requirements in qualification improvement

Categories of employees in educational institutions	Areas where improvement in qualifications is necessary
Administration	■ Effective management of training institutions in the new conditions ■ Marketing and the basics of the education business ■ Methods for analysing the labour market ■ Designing curricula to meet European requirements ■ Organisation of new forms of learning (modular, distance etc.) ■ Introduction of integrated procedures, guaranteeing the quality of the educational product

Categories of employees in educational institutions	Areas of qualification improvement
Teaching staff (teachers, training instructors)	■ Curriculum development ■ Development of teaching aids ■ Acquisition of new teaching methods ■ Organisation of independent work for the students ■ Practical work ■ In-course placements in specialisations ■ Procedures for objective assessments of students' knowledge, competence and skills ■ Use of modern information technologies
Teaching support staff	■ Information support for the teaching process ■ Modern equipment for the teaching process

It is interesting to compare this information with an analysis of teachers' motives for upgrading qualifications conducted by the Adult Education Institute, St Petersburg University of Pedagogical Skills, in 1994-1996 (cf. Table 5).

Table 5
Teachers' motives for upgrading qualifications

	Motives for participating in qualification improvement system	Number of teachers (%)
1	Improving skills in teaching methods	82.7
2	Finding out about new methods and teaching resources	80.2
3	Refreshing subject knowledge	72.9
4	Enhancing general cultural level	37.8
5	Improving socio-educational training	37.8
6	Deeper understanding of new social phenomena	25.1

Within the pilot project, one aspect of the groundwork was improvement of the qualifications of two categories of employees: managers of educational institutions, and teachers and training instructors.

Close attention was paid to studying the experience of foreign counterparts in organising the educational process, the development and use of teaching material and the organisation and planning of a system to improve qualifications. The experience of combining these aspects of work into a single programme to manage the quality of work in an educational institution was of particular interest. At the initial stage of introducing a programme of quality-assurance of educational services, the key problems affecting performance in a teaching institution were outlined. An action plan was worked out for each of the problem areas identified and provisions for upgrading the qualifications of all categories of employees was included in each plan. In addition, annual discussions between the administration and the teaching staff identified certain needs in the area of qualification upgrading and retraining. The manager of each structural sub-division is responsible for the analysis of qualification upgrading requirements, qualification upgrading schedules for staff at lower levels, monitoring the qualification upgrading process and direct training of employees in the sub-division. Within this remit, the sub-division managers draw up annual schedules for the improvement of the qualifications of staff in their own sub-divisions. These programmes must serve the development needs of the educational institution itself as well as the qualification improvement needs of each member of the staff.

One result of this meticulous planning is a saving of the resources of the teaching institution. Qualification upgrading courses are usually expensive and the educational institution itself has to fund them. A cascade system of qualification improvement is often used, where one member of staff is sent to a university-organised course and that member of staff then organises a similar course for the other members of staff. The training always involves a break from work, scheduled, say, for the first half of the working day. On average, each member of staff might get 2-5 days of qualification upgrading training a year. Among the exceptions to this are special subject and foreign language teachers who are allocated a longer period, with foreign language teachers being sent on a study trip to a country in which their foreign language is spoken. If a special subject teacher does not have industrial experience in the appropriate sector of the economy, the teacher is sent on an extended placement of up to six months in one of the enterprises in that sector.

Every educational institution is focused on attracting highly qualified staff and, therefore, actively supports those teachers who undertake special study and gain upgrades and additional knowledge.

Foreign partners put a high value on their time and pay particular attention to acquiring qualifications in the course of practical work, for example, during teachers' meetings. Experienced teachers may discuss themes for course work and new entrants to the profession often attend these discussions so that they can take part in the following year's work as fully-fledged members of the team.

One way of enhancing qualifications is to attend the classes given by colleagues. These open lessons are planned in advance. The teacher selects both the theme of the lesson and the teachers who will attend. Taking the open lesson and being invited to it are taken into account in the scheduling of the teaching workload. The main criterion for assessing teaching performance, however, remains the results, in terms of certification, achieved by the students in a particular subject.

There are no standard regulations on dates or lengths of courses to improve qualifications. The educational institutions have to plan this themselves and pay for it out of their own resources. However, one exception to this is the situation where the education management authorities introduce new educational standards or regulations that require clarification. In this case, free seminars are organised for administrators in educational institutions and information packs are sent out.

The following impressions emerge from a comparison between the Russian system and the systems used to improve qualifications in other countries.

1. The Russian system of qualification improvement is more centralised than those found abroad. Schools in Western countries plan qualification improvement for their staff independently and choose the retraining and qualification upgrading courses their staff will take. One result of this is that courses are more effective, because of the higher level of motivation among participants.
2. In foreign training institutions, a large proportion of qualification improvement happens within the educational institution itself, through exchange of experience and cascading by those who have attended courses.
3. In Russian training institutions, there is significantly less use of certain ways of improving qualifications such as study trips by special subject teachers and industrial instructors to enterprises in the relevant sector.
4. In Russian training institutions, foreign language teachers do not usually have the option of making study trips to the countries in which their foreign language is spoken.

During the pilot project, attempts were made to introduce improvements to the staff qualification upgrading system in all sectors. For example, in the wood-processing sector, a requirement was identified for short courses for teachers on European quality standards for sawn timber and furniture manufacture. Programmes for courses in these areas are now at the development stage.

As part of the project, teachers in educational institutions working in the wood-processing sector attended workshops on subjects they themselves chose, including:

- quality standards for timber and wood materials;
- furniture repair;
- furniture upholstery; and
- computer-controlled lathe work.

One of the routes to teacher qualification improvement used by schools in Petrozavodsk was a visit to Tekhno-les 97, the exhibition and fair for timber technology, where teachers learnt about the products of leading Western manufacturers of equipment and tools for the wood-processing and timber industry. This new knowledge enabled them to adjust the range of subjects taught for the trade of 'joiner/carpenter'. They added to the course programme material on the study of design and on work centres for the manufacture of carpentry products, as well as material on new window and door designs to EU quality standards and on contemporary designs for houses. Short study trips like this for teachers and industrial instructors were recommended to pilot training institutions.

The training of teaching and administrative staff of educational institutions in the telecommunications sector proceeded along three main lines:

- management of a vocational school;
- design of teaching material, curricula and syllabi; and
- technical training.

As part of the project, two study trips were organised to Finland and one to Germany, where the teachers were able to learn about the vocational education system in these countries. This gave them a better understanding of different educational systems and of the training provided for various trades and professions in telecommunications.

The management training programme covered the following subjects:

- market economics, business and commerce, enterprise, the school and business;
- management, development of management concepts, leadership, management in school conditions;
- administration and management, opposition and change within organisations, ethical aims of change, multiple aspects of change, participating in change, business planning, analysis of current situations, study and analysis of the labour market and of perceptions over a five-year period;
- strategic planning, company aims and ownership, organisational values, business, organisational ideas, short-term specific goals in a 3-5 year period, means of achieving these aims; and
- development planning, product development (curricula), production development (teaching methods, premises, materials, equipment), organisational development, management and personnel, product marketing and financial planning.

As a result of this study, Novgorod Technical and Economic College designed a three-year plan and described the aims and philosophy of its educational activity.

Teachers in the pilot training institutions attended a seminar on 'New concepts in vocational training – a modular approach', where, via a modular approach, they learned about progressive technologies in vocational teaching. The essence of the modular approach is that the student works independently within a curriculum which is presented in the form of modular teaching units. There are several benefits to this:

- the content and the assimilation process can be adapted to the abilities and needs of the students;
- the learning process is managed via feedback and by establishing basic, intermediate and final goals to orient the student towards achieving the planned result;
- full achievement of the training targets can be guaranteed; and
- the relationship between teacher and student is one of parity.

The workshop participants learned how to structure modules and how to develop them through various stages. They learned about the experience of Russian teachers using a modular approach in their own work. There are plans to apply the modular approach to developing teaching materials for the specialisations taught in each educational institution.

As part of the workshop on 'Improving the qualifications of teachers and instructors in vocational schools', college teachers learned about:

- new requirements in teacher training and retraining in the vocational education system in the new situation in Russia;
- teaching methods in vocational education in the new conditions; and
- a European approach to methods of developing and using teaching materials and resources.

The workshop material opened up new ideas on training and retraining specialists. Through the seminars on technical training, college and vocational lyceum teachers of information technology and computer skills learned about the present state of, and future development in, means of communication and telecommunications and computer technologies, as well as study modules and curricula for subjects coming onto the mandatory list for training in electronic communications technology. The seminars provided the opportunity to study:

- the structures of telecommunications networks;

- the systems used for various kinds of connections;
- trends in and use of new means of telecommunications;
- the variety of cables used and their electrical parameters;
- the structure of switching units and their specifications, computer network equipment etc.

Another outcome of the project was that teachers and their colleagues in educational institutions were able to acquire knowledge and practices which gave them greater confidence in introducing improvements to teaching procedures. They gained experience of designing teaching material and working with it. The European approach could not be copied and applied in full to the Russian education system, but it could be used in part. Russian teachers do not, as a rule, have sufficient active knowledge of a foreign language and they do not have the opportunity, and often the knowledge, to use computers in their teaching. For experience to be nurtured and disseminated successfully, training has to be given in the English language and in computer skills.

We would like to conclude this section by pointing out the issues that are still unresolved.

- *How to create a system of qualification improvement, based on the actual needs of training institutions, where the school itself can conduct the qualification improvement analysis, schedule the work and choose courses for its own staff.*
  This problem can be solved, provided there is support from the regional and federal education authorities, since what is required is a change in the system of funding. The educational institutions must receive financing for improving the qualifications of their staff and must pay for the courses selected.
- *Training and retraining teaching staff in special subjects.*
  This problem can be solved with the support of European experts. A good approach would be to organise extended courses for improving qualifications or to hold targeted ongoing seminars, with diplomas being issued for retraining.
- *Training and retraining teaching staff in modern methods and teaching technologies (problem-oriented, modular etc.).*
  This problem can be solved with support from European experts, through seminars and methodological assistance.
- *Training specialists in educational methods and other members of the teaching staff in the design of new forms of education and training (open learning, distance learning etc.), possibly by means of seminars, study trips and exchanges.*
- *The use of computers in the teaching process.*
  This problem can be resolved with support from European experts. Foreign teaching systems would have to be acquired and adapted for use in the teaching process.
- *Development of training placements.*
  Help from foreign counterparts is required to develop partnerships between training institutions with similar profiles, to improve programmes of industrial training, to organise study tours and to introduce methods of organising practical work for those involved in a particular specialisation.
- *Communication problems.*
  These can be solved with the assistance of the European experts, by learning foreign languages using new intensive methods, improving the teaching of foreign languages, and study tours to countries where the languages studied are spoken.

5. Managing a Vocational Education System in Conditions of Transition to a Market Economy

Reforming the vocational education system requires the management of the system to be changed. Comparison of foreign and national experience of management highlights a range of issues which are of particular importance in a transition period. These include:

- distribution of authority between various levels of management;
- definition of management goals;
- identification of efficient management methods; description of management structures; and
- the organisation of training for management personnel to help them deal with these new tasks.

5.1 Allocation of authority between various levels of management

The Russian vocational education system has three main levels of management: the federal; the regional; and the educational institution. The regional level also contains a municipal level. A comparative analysis of Russian and foreign practice shows that the allocation of real authority between different levels of management is closely linked to the source of financing for the vocational education institution. Because of this, the issue of financial provision for the initial vocational education and training system was given particular prominence during the project.

Analysis of foreign practice also revealed that, in European countries, multi-source financing of vocational education and training institutions is widespread. In Germany, for instance, vocational education is financed by the government (8% of total cost), the employment service (30%) and by companies which provide work (61%). Students and trainees contribute one per cent. Companies are more willing to share in the financing of educational institutions that train future employees for a particular sector or company. It follows that greater dependence of vocational schools on financial support from companies forces them to be alert to the smallest changes in the labour market, to be willing to switch over to training in new specialisations and to offer new types of educational services.

Several European countries have made the transfer to a market-oriented model, increasing the responsibility of the training institutions themselves for their own financing. In Great Britain, for example, vocational colleges act as independent companies with the right to attract government and non-government funding, to derive income from educational services and to take their own decisions on the allocation of their income and on how it is invested in the teaching process. If a college offers low quality educational services, it may go bankrupt.

The 'additional funds' brought in by European vocational institutions are derived from providing educational services on a fee-paying basis. Vocational schools do not sell goods made by the students or provide household services, as the profits from these would, in any event, be deducted from the budget. Other, similar constraints are imposed by the fact that the activity of an educational institution is defined, by law, as providing educational services. Economic institutions and enterprises, especially those which are small or medium-sized, do not regard vocational schools as competitors and are happy to cooperate with them, sending their employees on courses to improve their qualifications at the vocational schools and providing students from these schools with work experience.

It is obvious that, given the current socio-economic situation, the European models cannot be transplanted directly into the Russian system of vocational education. However, the notion of multi-source financing of vocational education institutions prompted the Russian partners into meticulous analysis of their own practices in attracting non-budgetary funding. The main sources of such funding were identified as:

- entrepreneurial activity in initial vocational education and training institutions (production, renting out premises and equipment);
- additional fee-paying educational services offered to students;
- additional fee-paying educational services for students from other training institutions;
- training, retraining and qualification improvement courses for staff from institutions and enterprises over and above the government allocation and on a contractual basis;
- provision of training to members of the public in work practices which enable them to give up extraneous paid services or to get additional income from such services;
- provision of expert and information services, consultancy, certification and research;
- payment for use of the institution's facilities by other organisations;
- sponsorship; and
- grants from international organisations.

It would be very worthwhile to carry out an analysis of which non-budgetary sources are used by each of the initial vocational education and training institutions, which are not used and why. This analysis could be used to provide guidance to the management bodies on how to set about creating the conditions needed to expand non-budgetary funding sources. Such conditions include the preparation of regulatory documents, recommendations on educational methods, good information provision and training of specialists. A general principle for dealing with the issue of multi-source financing could be: where the management body does not provide an educational institution with the necessary resources, it must enable that institution to be able to find for itself the resources it needs. An important point, not to be lost sight of, is that the funding of training institutions, from budgetary or non-budgetary sources, must depend on the quality of the educational services they offer, and these services themselves depend on many external factors such as the qualifications of the teaching staff, the quality of study resources etc. Authority should be allocated to the different management levels in a way that ensures that each level is able to create the conditions necessary for the provision of the required quality of educational services.

5.2 *Management aims*

The function of management in the educational system is to create an environment in which it is possible to achieve the social and pedagogical goals of education. Current management theory and best management practice suggest that the key condition for achieving these goals is that the staff is well trained to implement them. The quality and training of staff is, therefore, a central focus in foreign management practice. As mentioned in preceding chapters, there is now a change in attitude to the aims of education in training institutions themselves. In foreign practice (and even, sometimes, in current practice in Russia), the requirements of prospective students is a key point in defining educational goals, as is the need for them to be trained to deal with interdisciplinary problems and in self-tuition methods. Responsiveness to economic demands and to the need to train specialists to match the model suggested by industry is on the increase.

Knowledge is no longer considered the final goal of education but one of the requirements for problem-solving in those sectors to which the educational institution is oriented.

Each management level has the tools to create conditions conducive to helping the teaching process achieve the modern goals of education. These tools include the information, education, academic, staff, material and financial resources available to it. From the European experience of education management, we identified a range of management mechanisms which enhance teaching quality. These were:

- assessment of demand for the services offered;
- assessment of the quality of the educational services offered, using a questionnaire to survey customers (work providers, students and their parents);
- assessment of the quality of the work produced by auxiliary staff (accountants, study sections etc.), using a questionnaire to survey the staff in the educational institution who use the services of these staff members; and
- initiatives to improve the quality of services offered.

The Russian partners in the project feel that only some elements of teaching-quality management, such as checking the quality of documentation on educational methods, monitoring the quality of individual lessons and other types of teaching etc., are to be found in Russian vocational education and training institutions. Attention is focused not on analysing the results of the educational process or the extent to which these meet social expectations but on monitoring individual aspects of that process. Neither are auxiliary services properly monitored and, indeed, these services are now beginning to take precedence over the main activity of the teaching institutions.

In an effort to meet the social expectations of education, management is undertaking a wide-ranging campaign to inform the public of the results achieved by the educational institutions but, so far, this is only at the initial stages.

5.3 *Management methods*

In the study of foreign practice in the management of vocational training institutions, many of the Russian specialists focused on the management methods used. They noted that staff matters occupied prime position in the management system. For managers of vocational education and training institutions, the main task is to motivate teachers and stimulate self-motivation. Offering a vision of the future of the teaching institution and of the professional future of the teachers themselves is of particular importance. Managers should support the teachers, reward their activity and nurture confidence in colleagues. Leadership is often best exercised through consultation, which can be a two-way process.

The organisation of group work to find collegiate solutions was of particular interest to the Russian specialists. This method is used when adopting administrative decisions, at administration board meetings, and pedagogical decisions, at meetings of the teachers' council.

Group work is widely used in curriculum planning and modification. The following stages can be identified here:

- analysis of the level of demand for vocational school-leavers in a particular specialisation, identification of the link between demand and the quality of education, and identification of specialist qualification requirements;
- definition and modification of the aims of vocational education, application of these aims to the subjects taught, outline of the various stages of vocational education and establishment of the aims of each stage and modification of the composition of the disciplines taught at each stage;

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- assessing the ability of the teaching staff to achieve set aims, and defining the steps to be taken to improve staff qualifications or adjust aims;
- assessing the adequacy of the teaching resources for achieving the set aims and setting out the steps to be taken to consolidate resources or adjust aims;
- assessing the level of readiness of the students to absorb the educational content, and taking steps to improve this level and/or adjust the educational content; and
- defining the key factors to be used to evaluate the educational process and to identify possible ways of adjusting the curriculum.

To implement the tasks at each stage of curriculum planning, teachers and instructors work in groups and map out the work to be done by the group. The inclusion of teachers in the decision-making process helps create the psychological, pedagogical and organisational conditions which are essential for the successful implementation of these decisions.

5.4 *Management organisation in a teaching institution*

Openness to new aims and management methods is a prerequisite to change in the organisational structure of management, too. During the project, the Russian partners took particular note of matters concerning improvements to the organisation of management in training institutions. Attempts were made to identify the essential features of the European management models, to critically analyse their own experience and to sketch out the structure of an optimal organisational model for the management of initial vocational education and training institutions.

The attempt to describe management sub-systems, based on an analysis of the various stages and main aspects of the educational process, was also considered particularly relevant. In this approach, seven management sub-systems can be identified and each of these is characterised by a particular set of responsibilities.

Table 6
Management sub-systems in vocational education and training institutions

'Admissions'	Development and implementation of actions concerning the organisation of admission of students
'Teacher-Student'	Development of curricula and syllabi, defining criteria for assessing quality of training of specialists, recommending various types of teaching material, setting specifications for monitoring the results of the educational process
'Administration-Student'	Defining qualification requirements for various categories of staff, planning work for all sub-divisions of the school, drawing up regulations on governing bodies of schools
'Teaching resource unit'	Regulations for the inspection of subject-dedicated classrooms and workshops
'Social and housekeeping unit'	Drawing up regulations for hostels, organising catering and health care
'Sports and health centre'	Action to organise sports and improve level of students' physical education
'School-leaver'	Organising cooperation between higher education institutions and enterprises on job placement for school-leavers

This list of sub-systems can, of course, be further refined. The value of defining such sub-systems is that it creates the preconditions necessary for the development of management techniques to deal with a specific set of responsibilities. At the same time, we can construct an analytical framework to deal with the allocation of management functions.

A comparison of European and Russian organisational management models shows that they have different approaches to the organisation of management activity in teaching institutions.

In European practice, all the administrative sub-divisions are divided into core activities (directly related to the teaching process) and auxiliary activities (personnel, accounting, public relations etc.) which are assessed by the core subdivisions. In Russian practice, the opposite is the norm: the auxiliary subdivisions assess the work of the core subdivisions.

In European practice, there is a subdivision, with a nominated person in charge, which is directly responsible for the quality of the training offered to specialists in a particular profile. In Russian practice, fragmentation of management functions is typical: different people are responsible for extra-mural and correspondence studies and the school director may have deputies who are responsible for industrial training, general subjects, educational methods and so on. In the former, the emphasis is on training the specialist, in line with social expectations. In the latter, it is on regulating the process of training the specialist and either there is no one directly responsible for the final result or the school principal is mainly responsible.

In European practice, the structural sub-divisions which have full responsibility for the training of specialists in a particular profile can have a large degree of independence. They may, for example, have their own budget, the right to hire staff etc. In Russia, all the resources of the training institution are centralised.

This difference can be explained by several factors:

- the Russian system of educational institution management developed at a time when the country was experiencing a long period of stability;
- the system suits small, single-profile training institutions; and
- it evolved in a climate where there was a limited availability of resources and a need to function on a 'top-down' basis.

The conditions that gave rise to it have now changed but the management system itself has not.

During the project, many vocational education and training institutions tried to introduce fundamental changes to the organisational structure of management but encountered great difficulties. The attempt to modernise management was hampered by several factors, including:

- the obsolete list of official posts and the outdated staffing plan, which continued to be endorsed by education authorities;
- the lack of objective criteria for evaluating the performance of educational institutions; and,
- in both psychological and practical terms, the inability or unwillingness of management staff to deal with tasks which were new to them.

A positive result of the project was the recognition by the Russian partners that the training institutions have to set up management systems capable of ensuring provision of a multiplicity of high-quality education services, which can satisfy the aspirations of individuals, employers, the state and society as a whole.

5.5 *Improving management staff qualifications*

Implementing the project gave us the opportunity to identify the main issues involved in improving the qualifications of management staff, such as directors of educational institutions and the staff of the regional vocational education authorities. These issues centred on the inculcation of new attitudes to the essential role of vocational education, modern management ideas and organisational techniques.

The issue of new approaches to understanding the essential role of education was discussed in previous chapters. A focus on the person as the key resource is the overarching feature of modern approaches to management, such as the 'situation approach' and the 'behavioural science' approach. The main task of management is to create conditions in which people can realise their potential through self-development. There is a growing perception of the value of organisational culture, the elements of which include:

- all employees having the same general aims;
- direct employee participation in ways of achieving these aims; and
- all members of staff being interested in ensuring that the final outcome of the organisation's activity is in line with these aims.

The literature on management theory points out that the leading role in an organisation operating in today's conditions is played by the 'think tank': the group of people who have the most intellectual ability and are able to put forward novel ideas. It is emphasised that such people must be highly educated and have access to all available information.

An efficient management, which is committed to implementing promising ideas, can ensure there is a choice of organisational techniques available. Organisational techniques are a set of specific procedures, whose sequential implementation ensures that management goals are realised. They would include:

- information support for management decisions;
- decision-making procedures;
- means of implementing decisions; and
- the type of relationship management has with staff.

In education, existing organisational techniques can be divided, provisionally, into three categories:

- reactive management practices, aimed at taking and implementing operational decisions dictated by situations as they arise;
- management of the organisational system, for example, by using cycle graphs; and
- goal-driven management techniques focused on managing the development of the system.

Planning (projections) is the most widely used goal-driven management technique.

The experience of implementing the project on reforming regional systems of vocational education in North-West Russia was used as a tool for learning project planning methods. The discussions on objectives to be achieved during the project, the distribution of available resources and regular situation reports and exchanges were of particular importance in this respect.

The day-to-day organisation of management activity is governed by organisational standards:

- rules of business communication;
- office management; and
- organisation of the workplace and office.

In contrast to stereotypes of organisational activity, which reflect the individual experience of managers, organisational standards reflect the conceptual basis of management activity, its goal orientation and the drive for the most efficient management practice.

Improving the qualifications of management staff can involve major psychological difficulties. Many heads of educational institutions and other managerial staff have a great deal of experience of management, which has enabled them, in the past, to deal successfully with problems. They can, however, have quite ingrained management habits (organisational stereotypes), which can act as a restraint in the reform of the vocational training system. Familiarisation with foreign practice can help nurture critical attitudes to their own management experience and help create psychological preconditions for the acceptance of new ideas, goals and management methods.

6. *Conclusions*

The experience of implementing the pilot project for reforming regional systems of vocational education has allowed us to draw several conclusions about the very real problems of developing the vocational education system in Russia and finding ways of overcoming them.

The main problem involves the contradiction between the growing process of autonomy in vocational education institutions and the readiness of these institutions to become independent organisations with responsibility for their own educational, production and financial activity. The Soviet system of education, of which initial vocational education is a part, was based on strict state control over the activities of educational institutions.

The State:

- drew up the plans for admission to the training institutions:
- drew up the plans for the allocation and placement of leavers from vocational education institutions:
- organised the attachment of key enterprises to vocational schools; and
- allocated the minimum necessary funds for educational needs.

In the 1990s, the initial vocational education and training system began to crumble and a new system, focused on the demands of the labour market, began to take shape. The schools began:

- to decide on their own intake independently;
- to look for teaching facilities for technical and workshop training;
- to determine the profile of vocational training;
- to examine the employment opportunities open to students; and
- to look for additional sources of funding.

The Russian Federation Education Law gave vocational schools, like other training institutions, certain rights which enabled them to act independently. However, many vocational schools were not able to use these rights effectively.

As the experience of implementing this project has shown, the difficulties which emerged cannot be attributed solely to a low level of professional competence among heads of vocational schools who did not have (and could not have) the experience of working in market economy conditions. The reasons lay in the total absence of common ground between the way the vocational education was organised and the new socio-economic conditions.

A range of tasks had to be addressed:

- creating a mechanism for analysing the labour market;
- deciding on the main social partners for vocational education and training institutions and finding ways of promoting cooperation between them;
- developing a mechanism for reforming the content of professional education;
- organising training for teaching staff so that the new objectives in vocational education could be attained;
- creating new mechanisms for managing educational institutions; and
- drawing up regional and local programmes, at vocational school level, for the development of vocational education.

The objectives of the pilot project were to find ways of dealing with these tasks, if only for a limited number of training institutions in the North-West regions of Russia. The project provided participants with the opportunity to tackle these tasks and they did so successfully, despite the fact that they had to work in extremely difficult socio-economic conditions. The pilot project also enabled us to identify the difficulties encountered by the vocational schools and their heads in attempting to deal with these tasks.

The experience of solving problems associated with an analysis of the labour market, highlighted the need to evolve standard procedures for labour market assessment and to map out organisational structures which could use these procedures to provide vocational schools with the information they needed. The analysis identified employers' overall requirements in terms of the level of training acquired by vocational school-leavers. The employers were interested in a workforce which had a diversity of qualifications, and an adequate level of general education and occupational skills.

At the same time, we had to take into account the fact that requirements for training employees in a particular occupation could change rapidly, as could the requirements for staff training in different sectors of the economy. In addition, there could be quite sharp differences in the labour market between one region to another. This created the need for structures which would be flexible enough to meet the changing needs of employers and the vocational education and training institutions. In response to this need, consultative committees were set up during the implementation of the project and these were charged with developing relations between the training institutions and the social partners.

The experience of implementing the project also showed that the consultative committees could have a multi-level structure: regional; sectoral; intra-regional; or educational institution levels.

The task of finding ways to deal with the problems involved in reforming the content of vocational education was affected by:

- changes in the level of training required of vocational school-leavers;

- the dynamics of these requirements; and
- the need to make ongoing adjustments to the profile of vocational education in response to changing labour market conditions.

The experience of the project showed that this task could be broken down into several components:

- definition of the fundamental principles of vocational education and its main objectives;
- identification of non-variant elements in vocational education which could serve as a long-term focus; and
- definition of vocational education.

A major outcome of the pilot programme was the identification of the main tenets of current philosophies of vocational education. These are:

- a focus on changing the functions of students and teachers in view of the increasingly self-directed nature of the teaching process;
- giving an interdisciplinary character to the teaching process;
- adapting the educational content to employers' needs;
- changing the approach to defining the objectives of vocational education and evaluating its results; and
- focusing on training students to solve cognitive, professional and communications problems, independently.

During the pilot project, changes were made to the curricula and to individual subject syllabi in the pilot vocational schools. New teaching methods, such as role playing, modular study and problem-solving were introduced. Information technology was introduced as widely as possible and computer-based training was devised.

However, radical changes have yet to take place in the philosophy of education. Traditional attitudes continue to prevail and this can be seen in, for example:

- a reliance on quantitative measures of achievements in the educational process, i.e., assimilation of a certain mass of knowledge;
- the organisation of the teaching process by subject; and
- the fact that students undertake independent study in individual classes but are not autonomous as far as independent planning and goals setting are concerned.

The shortfall in results achieved is quite understandable. Reforming the vocational education system will be a very lengthy process and a lot of time will have to be devoted to:

- examining the task itself;
- overcoming existing pedagogical stereotypes; and
- designing new curricula and methods for the new generation.

The successful implementation of these tasks will depend, to a large extent, on the organisation and quality of the teaching staff training to work with new syllabi and curricula and, in particular, the teaching staff's readiness to draw up new syllabi and curricula.

While implementing the pilot project, the Russian stakeholders learned a great deal from their meetings with European colleagues and from the analysis of the problems besetting the

development of vocational education in Russia. They began to change their approach to the analysis of these problems, their conceptions of the objectives of education and their criteria for assessing its results. The seminars and workshops were of great benefit in helping teachers with various aspects of vocational education and training in particular sectors.

However, at the same time, the pilot project did not lead to any noticeable change in the regional systems for training teachers and for upgrading qualifications in initial vocational education and training institutions. The lack of time for such changes and the fact that the teacher training centres and institutions were not sufficiently involved in the implementation of the project were among the reasons for this.

The need for 'root and branch' changes in vocational education powered the search for ways to solve the problems affecting vocational education management. The implementation of the pilot project stimulated the stakeholders' interest in a comparative analysis of Western and Russian models of vocational education management.

The analysis showed that the main differences lie in:

- the allocation and delegation of authority between various levels of management;
- the goals and functions of management;
- management methods; and
- the organisation of management within a teaching institution.

Several of the participants in the project tried to introduce organisational changes and changes in management methods at the level of the teaching institution. More extensive changes would require decisions at regional and federal levels. Allowances must also be made for the complexity of the task of prevailing over management stereotypes which have had decades to settle into the mindset of those in charge of the education system.

Analysis of the results of the pilot project enables us to define the objectives of the next stage in the reform of the vocational education system. A readiness on the part of regional systems to reform themselves is, however, an essential ingredient which must constantly be borne in mind. An examination of existing regional programmes of vocational education development should allow us to make an informed judgement about this readiness.

The recognition by the regional management structures of the need to devise long-term programmes for the development of vocational education is critically important. Analysis of the regional programmes also demonstrates that techniques for drawing up these programmes are only just being developed here. If we compare the structure and content of existing regional programmes with international experience in designing educational systems, we can see that the approach to education planning adopted here is systematic only to a limited extent. The programmes are dominated by expositional statements about the tasks to be carried out but the methods for dealing with these tasks are often not explained. There are virtually no ways of assuring that the necessary resources are available. Neither are there any measures to ensure efficient use of resources, be they staff, material, financial or scientific. Programmes are neither oriented towards the development of links between society and educational systems nor towards the implementation of courses of action leading to public support of the vocational education system.

Regional programmes must focus on having a vocational education system which is more adaptable and better able to respond to changes in the socio-economic situation. They must incorporate ways of re-profiling vocational education and making improvements to curricula and syllabi. When the regional programmes were being analysed, the impression gained was that vocational education authorities were more prepared for changes in the organisation and content of vocational education

than in their own management practices. Meantime, it is difficult to expect changes to occur in the managed system if the management system itself does not change.

The implementation of the pilot project for reforming a number of regional systems of vocational education in the North-West was a powerful impetus to the development of these systems. None of the stakeholders has any doubt about the imperative to continue the project. It is expected that the successful implementation of the second stage will reinforce the results achieved so far and will develop methods for dealing with educational and management problems in the transition to a market economy. Resolving the problems which have proved intractable at the pilot stage must be an important priority of the next stage. It must also be remembered that the internal dynamic of the project itself has led to the positing of new issues in the development of vocational education.

Priorities for the next stage

The first priority is the framing of a regional policy for vocational education which will include:

- the development of a theoretical model of regional educational policy;
- the creation of mechanisms for shaping it; and
- the drafting of provisions on policy content.

The application of the new philosophy will involve far-reaching changes in the content of vocational education. Isolated amendments to curricula and syllabi are unlikely to lead to a solution.

One way of stimulating the necessary changes would be to set up a new system of overall certification for students, oriented towards identifying and assessing integrated results in vocational education.

Another suggestion is that new mechanisms to manage the development of regional systems of vocational education be set up. In this respect, it would be important to identify ways of promoting the efficient use of management resources, such as:

- registration of educational institutions;
- staff certification;
- contracts between the promoter and the educational institution; and
- contracts between the educational institution and the parent.

APPENDIX 1
The reform of the vocational education system - policy and programmes

The need for radical change in the vocational education and training system in conditions of socio-economic transition and the 'coming of age' of the regions of the Russian Federation in the management of their educational systems has led to the evolution of regional programmes for the development of vocational education.

The appendices contain information on three regional programmes: Leningrad Oblast, Novgorod Oblast and St Petersburg. The first two sections are analytical articles, written by experts from the regional education management authorities, and the third is the text of a regional programme (without appendices).

All three regional programmes have some features in common. They are all medium-term and are designed to be implemented over a few years. The main focus is on re-defining vocational training profiles, increasing provision for training in psychology and economics to prepare students for work in market conditions and improving the network of vocational education institutions.

1.1 *Reforming the system of vocational education in Leningrad Oblast in conditions of transition to a market economy*

There are currently 49 initial vocational education and training institutions, including 18 vocational lyceums, in Leningrad Oblast. The number of students on day courses was 22,728 at 01 January 98, while the capacity of the training institutions was 19,310 student places, thus giving a weighting factor of 1.18. During 1997, 3,849 students obtained a specialised qualification from initial vocational education and training institutions, on the basis of agreements with enterprises and employment centres.

In 1991, 52 vocational schools, including one vocational lyceum, were involved in training in Leningrad Oblast. The number of students in vocational schools was 22,028, an increase of 3%.

The rate of increase in the number of is shown in Table 1.

Table 1
Number of vocational lyceums, 1991-1997

1991	1992	1993	1994	1995	1996	1997
1	3	5	11	15	17	18

Young people in Leningrad Oblast can obtain qualifications in 62 trades and professions taught at the initial vocational education and training level and 20 specialisations at secondary vocational education and training level. In 1991, training was offered in 104 trades and professions, but only at initial vocational education and training level.

The list of educational programmes in initial vocational education and training institutions is given in Table 2.

Table 2
Educational programmes in initial vocational education and training institutions

Programme	Duration of course (in years)
Initial vocational education and training programmes (educational programmes in vocational schools)	
Educational programme for young people who have basic general education. The programme does not include upgrading the level of general education. By completing the course, the student acquires a qualification in a trade or specialisation(s).	1-2
Educational programme for young people who have basic general education. The programme includes the upgrading of the level of general education to secondary (full, general). By completing the course, the student acquires a qualification in a trade or specialisation(s).	3
Educational programme for young people who have secondary (full) general education. By completing the course, the student acquires a qualification in a trade or specialisation(s).	1-2
Initial vocational education and training programmes at higher level (educational programmes in vocational lyceums)	
Educational programme for young people who have basic general education. The programme includes upgrading general education to (full, general) secondary level. . By completing the course, the student acquires a qualification in a higher-skilled trade or specialisation(s).	4
Educational programme for young people who have (full) secondary general education. By completing the course, the student acquires a qualification in a higher-skilled trade or specialisation(s).	2
Vocational training programme	
Educational programme which does not include upgrading the students' educational level above the basic general level. By completing the course, the student acquires a qualification at the level for that particular specialisation(s).	1-2
Educational programme which includes the acquisition of basic general education and a qualification in a particular specialisation(s).	2-3

Information on employee training in initial vocational education and training institutions in 1991-1997 is given in Table 3. Figures are given for the placement of school-leavers in employment. They show there was a peak in positions exempt from compulsory allocation in 1997. One of the reasons for this was the lack of obligatory job places.

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Table 3
Employee training in educational institutions offering initial vocational education in Leningrad Oblast, 1991-1997

	1991	1994	1995	1996	1997
Number of training institutions – TOTAL	52	51	51	51	51
INCLUDING:					
Day-training institutions	50	49	49	49	49
OF THESE:					
Divisions for trainees with incomplete secondary schooling		46	46	47	47
Divisions for trainees with complete secondary schooling		28	30	32	30
Groups of young people without secondary schooling		16	30	28	30
Number of students – TOTAL		22 238	21 730	23 142	23 207
INCLUDING:					
In day institutions	22 028	21 730	22 180	22 770	22 728
OF THESE:					
In divisions for trainees with incomplete secondary schooling		17 938	18 161	18 575	18 840
In divisions for trainees with complete secondary schooling		11 381	1 840	2 072	1 957
Groups of young people without secondary schooling		2 411	2 179	2 123	1 931
Number of students taken – TOTAL		10 296	10 086	9 758	9 772
INCLUDING:					
In day-training institutions	9 888	9 577	9 438	9 354	9 121
In divisions for trainees with incomplete secondary schooling		6702	6933	6749	672
In divisions for trainees with complete secondary schooling		1138	1242	1376	130
Groups of young people without secondary schooling		1497	1263	1229	110
Training of qualified employees – TOTAL		8 470	8 703	8 199	8 501
INCLUDING:					
In day-training institutions	9 200	7 798	7 980	7 663	7 972
OF THESE:					
In divisions for trainees with incomplete secondary schooling		5 133	5 405	5 413	5 560
In divisions for trainees with complete secondary schooling		1 249	1 227	1 086	1 288
Groups of young people without secondary schooling		1 416	1 348	1 164	1 124

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	1991	1994	1995	1996	1997
Of those who had completed courses at day secondary institutions:					
Placed in work		4 747	5 135	4 696	4 079
Not placed in work		3 051	2 845	2 967	3 893
INCLUDING:					
Admission to higher (HE) and secondary (SSUZs) educational institutions		353	472	705	878
Called up for national service		1 494	1 413	1 643	1 446
Offered employment of own choice		1 204	960	619	1 569
Including lack of obligatory job places		629	730	619	999

Table 4 gives figures for leavers, by branch of industry.

Table 4
Leavers from vocational training institutions, Leningrad Oblast, by branch of industry

No.	Branch of industry	1994		1995		1996		1997	
		persons	%	persons	%	persons	%	persons	%
	TOTAL LEAVERS	**7 798**		**7 980**		**7 663**		**7 972**	
1	Engineering and metal-working	585	7.5	667	8.3	857	11.2	145	1.8
2	Light and food industries	1 490	19.1	1 916	24	897	11.7	2 054	25.8
3	Sales and services	440	5.6	749	9.4	1 354	17.7	825	10.3
4	Transport	1 358	17.4	985	12.3	770	10	1025	12.9
5	Chemical and mining industries	436	5.6	398	4.9	256	3.3	200	2.5
6	Electrical engineering	354	4.5	230	3	301	3.9	145	1.8
7	Construction	1 447	18.5	1 098	13.7	970	12.7	817	10.2
8	Agriculture	1 342	17.2	1 386	17.4	1 447	18.9	1 250	15.7
9	Forestry, wood and timber	128	1.6	121	1.5	125	1.6	71	0.9
10	Other	218	2.8	430	5.4	686	9	1 557	19.6

An analysis of vocational training in 1995-1997 (Table 4) shows an increase in the training of workers and specialists for the light and food industries and in service industries and a decrease in trainees for the engineering and metalworking, electrical engineering, chemical and agricultural sectors.

Since 1992, vocational education and training institutions have been running courses for training, retraining and upgrading the qualifications of those not in employment or who have been made redundant.

Table 5
Training, retraining and upgrading of qualifications for the unemployed and for redundant workers

1992	1993	1994	1995	1996	1997
150 persons	275 persons	792 persons	1340 persons	2926 persons	3849 persons

The numbers of people on courses in initial vocational education and training institutions under industrial contracts in 1997 are given in Table 6.

Table 6
Number of people in courses in initial vocational education and training institutions under industrial contracts in Leningrad Oblast in 1997

Category:	Total (persons)	Including		
		training new employees	retraining employees	upgrading qualifications
Total	**3 849**	**2 010**	**1 089**	**750**
of these:				
Women	1 670	926	502	242
Disabled/veterans	1	-	-	1
Young people under 30	2 044	1 199	547	298
Under referral from Employment Service - TOTAL	549	308	207	34
of these:				
Women	373	245	114	14
Disabled/ veterans	-	-	-	-
young people under 30	394	280	109	5
under contract with enterprises - TOTAL	605	191	89	325
including:				
state enterprises	391	135	68	188
non-state enterprises	214	56	21	137
Other	-	-	-	-
under individual contracts with private individuals	2 695	1 511	793	391

In addition to the initial vocational education and training institutions, employee training for qualified work is also offered at 21 secondary vocational education and training institutions and 5 higher vocational education and training institutions, and at 2 vocational schools run by the State Correctional Institutions of the Russian Federation Ministry of Internal Affairs (a total of 77 educational institutions).

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Initial vocational education and training institutions employ 2,946 people, including 707 lecturers and teachers and 984 industrial instructors. A breakdown of the qualification levels of the teaching and administrative staff shows that 70% of lecturers and teachers, 45% of industrial instructors and 46% of initial vocational education and training institution managers are in the higher qualified category.

A realistic picture of the funding of vocational education and training vocational schools and lyceums over the last three years can be gained from looking at some average figures. Actual costs for all types of expenditure were 89% of the approved budget in 1995 and 67.01% in 1997. Expenditure per student was 2.144 million roubles in 1995 and 2.120 million roubles in 1997 – a drop of 24,000 roubles, not allowing for inflation.

Average salaries in schools and lyceums for 9 months of 1997 were 475,000 roubles, whereas salaries for educational institutions financed from the local budget and the Oblast budget were 515,900 roubles and 720,900 roubles, respectively.

The number of students remains at 22,700 but the finance for budget items covering the cost of textbooks and visual aids was not provided, nor were funds provided to cover the cost of major repairs, the general upkeep of buildings, general outgoings, business travel and communications. In 1997, there was a reciprocal itemisation to clear debts for communal services, amounting to 15.7 billion roubles.

With this deficit in budget resources, the non-budgetary activity of the vocational training institutions assumed greater importance. In 1997, income from non-budgetary sources was 12.1 billion roubles (21% of the amount due from the federal budget). The workshops and laboratories offered their services to the public and produced items (metalwork, tailoring, carpentry, furniture, tools etc) worth 1.6 billion roubles. Agricultural schools produced and sold agricultural produce (vegetables, milk, meat, cereals etc) worth 2.7 billion roubles.

In response to Government Decree No 908 of 21 July 1997, 'On the concept of reform of the initial vocational education system', the Education Committee drew up a Regional Programme for the development of education in Leningrad Oblast. This was approved by Leningrad Oblast Government Decree No 40, which was passed on 12 November 1997.

The preliminary study of the Oblast labour market carried out in 1996 by the vocational education and training authority, as an integral part of the regional programme, showed that the estimated need for training and retraining places for employees and specialists was 14,800 in 1996 and 78,000 in the period up to 2000 (Table 6).

In 1997, Leningrad Oblast initiated a process of reducing the number of officially registered unemployed. The number was reduced by 13,700 or 28%. During that year, 58,800 people reported to the state Employment Service offices but this was 15,400 less than in 1996.

In 199, the number of vacancies offered by enterprises in the Oblast rose by a factor of 1.9 and the ratio of non-working people to each advertised vacancy fell to 2.6. The figure for the officially registered unemployed in 1997 was 4.8% of the economically active population.

Table 7
Training and retraining employees in Leningrad, 1996-2000

No	Raion, town	1996 persons	1997 persons	1998 persons	1999 persons	2000 persons	Total
1	Boksitogorski	530	526	548	563	553	2 720
2	Volosovski	480	575	643	530	780	3 008
3	Volkhov town	1 037	972	960	930	895	4 794
4	Volkhovski	495	514	580	552	522	2 663
5	Vsevolozhski	679	614	765	800	835	3 693
6	Vyborgski	1 433	1 560	1 437	1 560	1 533	7 523
7	Gatchina town	916	975	896	910	930	4 627
8	Gatchinski	574	579	610	762	839	3 364
9	Kingisepski	978	1 058	1 203	1 200	1 200	5 639
10	Kirishski	860	860	860	860	860	4 300
11	Kirovski	940	960	985	985	1 015	4 885
12	Lodeinopolski	238	185	196	234	174	1 027
13	Lomonovski	240	240	270	240	240	1 230
14	Luzhski	758	767	769	769	799	3 862
15	Pikalevo town	230	220	235	210	205	1 100
16	Podporozhski	453	337	490	560	490	2 330
17	Priozerski	473	398	527	389	539	2 326
18	Slantsevski	456	482	527	507	520	2 492
19	Sosnovy Bor	450	569	650	601	780	3 050
20	Tikhvinski	1 832	1 600	1 921	1 941	1 943	9 237
21	Tosnenski	479	478	540	540	540	2 577
22	Shlisselburg town	322	322	329	329	329	1 631
	Total	**14 853**	**14 791**	**15 941**	**15 972**	**16 521**	**78 078**

The population permanently domiciled in Leningrad Oblast increased over the last four years:

1994 - 1,666,700

1995 - 1,669,200

1996 - 1,671,100

1997 - 1,681,000 (at Dec. 1 1997)

Since 1995, the mortality rate in the Oblast has been declining gradually but, even so, it remains very high: 6 in 1,000. The demographic situation is also adversely affected by the low birth rate: less than 7 per 1,000 population. These factors have, however, been balanced by inward migration, which helps to push up overall population growth.

In the next 3-5 years, the process of regrouping initial vocational education and training institutions should not encounter any difficulties. This view is reinforced by the results of an on-site study of the programme for reforming specific schools in territorial groupings.

Table 8
Population dynamics: Leningrad Oblast

	1994	1995	1996	1997
Permanently resident population ('000)	1,666.7	1,669.2	1,671.1	1,681.0
of this:				
Men	772.6	773.6	774.0	7783
Women	894.1	895.4	897.1	902.7
as % of total population				
Men	46.4	46.4	46.3	46.3
Women	53.6	53.6	53.7	53.7
in:				
urban areas	1 105.4	1 107.2	1 107.0	1 232.2
rural areas	568.8	568.7	571.6	448.8
as % of total population				
urban areas	73.9	74.1	73.8	73.3
rural areas	26.1	25.9	26.2	26.7

Vocational education can only be developed if all levels – initial, secondary and higher – agree. All the vocational lyceums and some of the vocational schools are involved in joint projects with 30 higher education institutions in St Petersburg and the Oblast. These joint projects take different forms:

- agreements on joint cooperation;
- subsidiaries of institutes carrying out work in schools and lyceums;
- curriculum development;
- staff exchanges;
- putting the technical resources of lyceums and higher education institutions to other uses etc.

Vocational training institutions in the Oblast are involved, within the framework of the cooperation contract between Leningrad Oblast and the South Finland authority, in pilot projects and individual contracts with training institutions in Finland. In 1996, 88 employees and 270 participants in the educational system in Leningrad Oblast undertook training and retraining in international technologies. Participation in the Regional Observatory project has increased knowledge and skills in the field of labour market research and cooperation with employers. Only one school has taken part, so far, in the pilot project on vocational education and training reform in North-west Russia but there are suggestions that other training institutions should take part in the second stage and the Oblast has found new partners to facilitate this. Through international contacts in education, the Leningrad Oblast has been able to reform the content of education in line with European requirements.

■ *The future outlook for the development of vocational education*

The future development of the initial vocational education and training system will depend on a whole range of problems having been resolved. The following are the most important of these.

1. There is a lack of a clear-cut, regulatory and legal framework to give vital support to vocational education and training institutions. The Russian Federation law 'On initial vocational education' exists only in draft form and any amendments and additions have, therefore, to be made to the Standard Provisions of vocational education and training institutions. Allowing lyceums to be vocational training institutions, with the right to train specialists and to provide them with secondary vocational education, remains a thorny issue. The Oblast law 'On the regulation and control of the activity of the Leningrad Oblast educational system' has still not been adopted.

2. Financing of initial vocational education out of the federal budget remains unsatisfactory (incomplete or late) for all budgetary items.

3. Traditional links between vocational schools and employers have been ruptured. Enterprises have not invested in the development and replenishing of the schools' material resources. They have not offered places for work experience to students from vocational schools and this has made the students' search for employment more difficult.

4. There is also a range of social problems connected with the efficient use of space in hostels, including interruptions in heating and power supplies and in other types of communal services.

This situation shows up the need for a phased resolution of the problems set out in the regional programme for the development of vocational education.

In the short term (up to 2001), this will mean action to identify the existing options for improving the microeconomic efficiency of vocational education and training institutions.

For several years, the training institutions in the Oblast have been working in this direction and have accumulated a lot of experience in surviving difficult socio-economic conditions, which has enabled them not only to maintain the vocational education and training system but to positively improve it.

What are the routes to resolving the economic, social and educational problems? What processes are evolving in our vocational schools and lyceums? First, and without any doubt, it is possible to identify several trends that indicate that the financial and economic position of the training institutions is likely to improve.

1. Multi-source funding, primarily municipal, is being sought, insofar as this is allowed under the current regulatory and legal framework. Within the universal primary education programme, general education is available, on a contractual basis, to students in vocational schools and lyceums who do not have basic education.

2. In some cases, the administration of a raion or town takes on the role of customer, placing an order for the training of workers in communal services, municipal services, manufacturing and agriculture.

   Before deciding which occupations they will provide training in, all vocational training institutions agree their plans with the raion administration. In future, to promote more efficient cooperation between the teaching institution and the administration, the Education Committee will draft model contracts with the customers and agree the regulatory framework for applying them. For its part, the administration will take the educational resources of the vocational schools into account in urban and rural planning.

3. Studies have been carried out, and the results disseminated, on instances of cooperation between schools and secondary and higher vocational training institutions, where the resources, both material and technical, of the training institutions were put to efficient use and start-to-finish curricula and syllabi to provide multi-level tuition were drawn up. Integrating initial and secondary vocational education and training institutions into a single system of basic vocational education meant that an integrated type of vocational educational institution – the regional college – could be created.

4. The system of multi-institutionalism, which has evolved as a means of procuring more funding for training institutions, will, in the process of setting up and supporting training institutions, open up possibilities for cooperation between national and municipal management bodies and other interested bodies. Such cooperation is likely to focus on increasing the scope of funding and examining various mechanisms to manage the activity of the training institutions better, such as mechanisms to involve the public in the teaching system through boards of trustees or guardians and other, similar bodies.

5. Relations between the vocational training institutions and employers are being improved through such joint activities as:

   - running advertising fairs for student places, together with the labour and employment committee;
   - inviting potential work providers to school-leaver qualification examinations, not just to take part in student certification but to choose students for vacancies; and
   - incorporating specialist work experience at another teaching institution in the curriculum, so as to improve student ratings on the labour market.

1. There are moves to draw up a Regional List of Occupations and Specialisations in initial vocational education as part of the national and regional component of the State Standard on initial vocational education.

   This Regional List will reflect the nature of the economy and the qualification structure of employees in Leningrad Oblast.

The policy-shaping initiatives taken during the implementation of the reform programmes give some indication of how the content and objectives of training in vocational schools and lyceums are likely to evolve, i.e., with an emphasis on several key aspects identified below.

1. Transition to multi-level vocational education, by:

   - drawing up curricula, which support variety and mobility of content and multi-level training, while taking transference of national educational standards at all stages and levels into account;
   - creating groups to prepare for training in higher education institutions, e.g., to agree contracts between schools and higher education institutions;
   - expanding the practice of stage-by-stage certification of students, as they achieve the appropriate level of skill;
   - changing the duration of vocational training, depending on the nature of the trade or profession;
   - reinforcing a sense of professionalism in the teaching of general education subjects so that students get a more complete and qualitative grasp of the trade or profession;

- approving the new educational content and the regional component developed in the special key centres (schools and lyceums) chosen to be experimental testing grounds at regional level;
- setting up regional colleges providing access for students to varied continuing education; and
- drawing up integrated curricula, to be applied in a new layer in the education system, in cooperation with leading European companies and international experts in educational technologies.

1. Expanding the profile and relevance of vocational training by:
   - training students for work in state enterprises, joint ventures and non-state or mixed ownership enterprises;
   - expanding training to encompass the services sector;
   - providing on-the-spot training, at the request of employment centres; and
   - providing guidance in the training of workers and specialists in a wide range of occupations, so as to enable school-leavers from vocational schools and lyceums to adapt better to the changing conditions of the current labour market.
1. Ensuring that student have the economic and psychological training necessary for work in market conditions by:
   - revising the economics curriculum for students at vocational schools and lyceums; and
   - including classes on psychology in the syllabus.

In Leningrad Oblast, the innovative activity of educational institutions is expected to generate strong links between various educational systems, forged into a single educational space.

The policy document on the development of the initial vocational education and training system in Leningrad Oblast, which was adopted at a meeting of the Oblast Vocational Education Council in January 1998, is intended to cover all aspects of training - content, method, organisational forms and cooperation of the participants in the educational process – in conditions of economic stability and to offer the public the opportunity to acquire vocational knowledge and practices in accordance with national educational standards.

1.2 *Development of vocational education in Novgorod Oblast*

At present, the educational system in Novgorod Oblast includes educational institutions of all levels and types, both traditional and new. The Oblast Education Committee, manages the entire education system from pre-school, through primary school to higher education at the Yaroslav Mudry State University of Novgorod and exercises direct control over the regional Centre for the Development of Education, the Borovichski Pedagogical College and initial vocational education and training institutions.

Since 1992, the Oblast Education Committee has been working on setting up an integrated regional system of multi-level vocational education focused on the requirements and capabilities of the individual, the area and the labour market. An objective-driven method of management has been adopted. In 1992, the regional programme for the stabilisation and development of education in the period 1993-1995, which contains a section on vocational education, was drawn up. Programmes for lower-level administrative areas were drawn up on the basis of the regional programme.

The situation regarding the initial vocational education and training system at the time the programme was set up is described below.

In September 1988, when the RSFSR Ministry of Education and the RSFSR State Committee for Vocational Education were reorganised, the Novgorod Oblast Soviet of People's Deputies decided to formally abolish the Oblispolkom Department of People's Education and the body that managed vocational and technical education in the Oblast under Gosprofobra RSFSR and to set up a new oblispolkom (Oblast executive committee) to manage public education. This amalgamation of the two departments brought in its train a considerable reduction in the strength of the vocational education establishment, as 30% of the staff lost their jobs. However, on the whole, these job losses affected only those in general services, such as the finance, book-keeping, accountancy and maintenance of materials and equipment. Nothing was changed in the management of vocational and technical schools.

Radical change in the vocational education management system began in 1992. When the Soviets were abolished in the Oblast, the 'oblispolkom' responsible for managing popular education was also abolished and an education committee was set up in its place.

The committee had the job of creating a single, integrated, multi-level system of vocational education in the Oblast. The committee was entrusted with the direct management of all vocational education institutions: 28 vocational schools and lyceums; 15 tekhnikums (specialised secondary schools) and colleges; and 3 higher education institutions (a pedagogical institution, an agricultural institute and a polytechnic). The main objectives of vocational education policy were set out in the first programme on the Stabilisation and Development of Education in the Oblast, 1993-1995. Under this programme, the first task was to restructure the Oblast Education Committee.

Functions such as licensing, organising staff, managing financial, material and technical resources and protecting the rights of juveniles were run on a 'start-to-finish' basis and the officials responsible for them carried out these functions for all types of educational institution.

Within the Education Committee at present, the vocational education department has on its staff specialists in the areas of work and vocational training in general education institutions, the content of initial vocational education, the coordination of the activity of secondary and higher vocational education and the formation of initial vocational education and training institution networks. Specialist members of the committee, who have responsibilities in the areas of secondary (full) general education, additional or special education for mentally or physically disadvantaged adolescents and the management of staffing, finance, material and technical resources, formulate and implement Oblast policy in all the institutions. As part of their responsibilities, all the Oblast Education Committee departments visited initial vocational education and training institutions and assessed the performance of the heads of these institutions in accordance with set criteria.

1993-94 saw changes in the management structure of the bodies responsible for education at the municipal level. Specialists liaising on work experience and vocational training were now found in raions and cities. In 1994, work began on decentralising the management of vocational education. Contracts setting out the responsibilities of the Oblast Education Committee and of the local education management bodies in the management and supervision of initial vocational education and training institutions were signed with all territories in the Oblast where such institutions existed.

A schedule for the integrated provision of scientific and methods resources for the development of initial vocational education in the Oblast was approved. This schedule set out the tasks and main objectives of the service managing these resources at various levels of vocational education management.

A system of multi-level vocational education institutions, capable of meeting the needs of individuals and of society for vocational education services of the required level and quality, was set up. At the beginning of 1998, the Oblast had 81 schools offering licensed vocational training in various specialisations. A teaching and industrial unit, where students were trained in six specialisations, had opened in Pestovo and eight general education institutions had set up divisions offering training in nine specialisations. In the vocational education system, there were 19 vocational schools, 6 lyceums and 16 secondary vocational education institutions. The Yaroslav Mudry State University of Novgorod is a centre of education, science and culture, which was set up during the integration process. It is one of three higher education institutes (the pedagogical and polytechnic institutes and the agricultural academy) and has its own structure of five colleges – arts and education, multi-disciplinary, technical and economic and medical and polytechnic.

The Oblast vocational education institutions train specialists in a total of 60 specialisations at initial level, 68 at secondary level and 51 at the higher level. Training is provided in specialisations which are new to the people of Novgorod: medicine, law and economics for the timber sector etc.

On 1 January 1997, the initial vocational education and training institutions were transferred from federal to Oblast ownership and, since August 1997, they have been financed out of the Oblast budget. In tandem with the transfer of initial vocational education and training institutions from federal to Oblast ownership, the Oblast Administration drew up and approved a programme for the development of initial vocational education for the Oblast for the period 1996-2000.

General education is the basis of vocational education. In the Oblast, as throughout the country, the situation regarding the organisation of work experience, pre-vocational and vocational training is complicated. The curtailment of work experience for students from general education schools at the end of the 80s and the beginning of the country's transition to a market economy had a deep-reaching effect on existing structures in that area of the education system. The decision by the principal enterprises not to take part in work experience, career guidance for school pupils and job placement for school-leavers resulted in the almost complete loss of employment opportunities for students, the disbanding of student industrial teams in village schools, the closing of work and holiday camps for school-children and the end of inter-school production training units for work experience.

Because of the lack of targeted funding, problems arose with the maintenance, increase and renewal of teaching resources and with acquiring and repairing tools and equipment. The increased turnover of practical trainers, the diminishing value of the subjects taught and the lack of material reward, all meant that the shortages soon began to have a major impact.

In many areas of education, there were no practical trainers left, as a result of the cuts, and this soon had a significant impact on the management of the practical-training teaching process and the career and personal development guidance offered to students.

After detailed examination of the situation, the Oblast Education Committee and the territorial education management bodies, with the support of the Oblast administration and the local authorities, put in place a series of governmental and organisational measures to deal with the crisis in the practical training and pre-vocational and vocational training available to students.

The programmes on the 'Stabilisation and development of education in the Oblast (1993-1995)' and the 'Development of the educational system in the Oblast in 1996-2000' had special sections on 'Vocational Education'. The main objectives of pre-vocational technical training for school pupils were defined: upgrading the quality of the content and improving the management of vocational training at all levels.

As part of the objective of meeting the needs of the individual in the new socio-economic conditions, some improvements were achieved in the structure of municipal education management bodies. A start was made on selecting specialists to liaise, not just on issues of work training but on vocational education as a whole. These specialists were also charged with the task of working out how a single vocational unit for the raion and city could be organised. This facilitated the creation of a new management system for pre-vocational technical training in which the most important consideration would be the satisfaction of the individual's requirement for vocational education in the transition to a market economy. A legal framework for the vocational education system was provided by the law on the 'Legal regulation of the activity of the education system in Novgorod Oblast'. Several orders drafted by the Committee and the regional Centre for the Development of Education gave approval to the following legislation: 'Provisional regional standard for work training', 'Regulation on the licensing of vocational training for pupils', 'Regional component of practical training for pupils', and 'Regulation on the issue of certificates to pupils who have successfully completed a programme of licensed vocational training'.

Thanks to the efforts of the education management bodies and the heads of the educational institutions, vocational education for pupils in senior classes was preserved. It is now offered as 19 specialisations in 81 educational institutions, depending on pupil demand. All schools were given a licence to offer vocational education and training at this level. The specialisations available are in line with the initial vocational education and training standard list. One hundred and fifty-eight teaching staff units at schools in the Oblast are involved in the process of integration with other vocational institutions providing training at various levels. Part of this process is ensuring the transfer of vocational education within the school/teaching institution/specialised secondary school/VUZ framework. In the 1997-1998 school year, for example, five village schools and Agricultural Lyceum no. 10 in Borovichski raion began work on transfer programmes. By jointly organising vocational training for pupils in the 8th to 11th grades, they were able to achieve strict conformity to initial vocational education and training standards. The students were offered a wider range of choice of specialisation. They could continue training in their chosen specialisation right through to the end of secondary school, go on to courses at the agricultural lyceum and move from there to Novgorod State University on a non-competitive entry basis. Within the Oblast, there is a growing tendency to transfer the organisation of vocational training for senior classes to vocational schools and lyceums and this has enabled pupils to become more proficient in their chosen trade or specialisation.

The emerging system of vocational education has forced the pace of change in management restructuring. Previously, the function of vocational education was to supply staff for sectoral ministries and departments and satisfy the labour requirements of the principal industries. Now, in conditions of transition to a market economy, the emergence of major enterprises as joint-stock companies and the concomitant increase in the number of small businesses has virtually eliminated the role of government departments in the management of the economy.

Changes in the economy have had a huge impact on the initial vocational education and training system. In 1992, the Oblast had 27 vocational and technical schools and 10 branches and 3 vocational and technical schools attached to the corrective labour institutions of the Ministry of Internal Affairs. A key enterprise was attached to each of these. This enterprise did not simply offer assistance to the schools but also took on more serious functions. The material resources of the majority of schools were itemised on the balance sheet of the enterprises and students were trained at the request of these enterprises and then allocated to work there. Student intake and the scope and profiles of training were shaped by the orders placed by enterprises and other organisations. Training was offered in more than 80 specialisations. With the loss of key enterprises, restructuring became imperative both for the network of vocational and technical schools and for the profiles offered in vocational training..

Over a period of five years, six schools were reorganised into lyceums so that the more able students could be trained to a level of vocational education approximating that available in specialised secondary schools. A number of schools were amalgamated to maximise the use of material resources and to broaden training profiles.

The scope of intake into the schools also changed. Over a period of five years, a level of 3,700 students was maintained but, in 1996, due to lack of resources, the level was set at 3,400. In 1997, however, we were obliged to increase this to 3,600 due to the administration's need to place students. The intake level has been set at 3,500 for 1998, with 1,500 on a contractual basis.

The key enterprises attached to all schools, apart from the Borovichski Refractory Kombinat and AO Akron, did not place orders to train staff and this made it difficult to develop a clear picture of the new specialisations demanded by the labour market and to create a resource base to provide training in them. The market for labour and for vocational education became distinctly regional in character. The overwhelming majority of the student and pupil intake in all vocational education institutions at initial, secondary and higher level was from Novgorod Oblast itself.

- *The integration of institutions*
  Two main components were identified in the process of reforming the vocational education system: providing specialists to satisfy the emerging regional labour market; and offering education to meet the needs of the individual. Vocational education also has its own fixed, multi-level and multi-profile nature. With the sharp drop in funding, there were hardly any means available to expand the network. A way forward was found through the integration of institutions offering one, or various, levels of education. The integration process began with the amalgamation of higher training institutions to form Novgorod State University. The amalgamation made it possible, in the first year, to broaden the list of specialisations offered and to add some, such as medical, legal and economic specialisations etc., which had not previously been offered in the Oblast but which were popular with school-leavers.

Secondary vocational education institutions were also integrated into the university and this made it possible to implement the concept of continuing vocational education. Today, the five colleges in Novgorod State University prepare specialists for 13 licensed specialisations.

The Oblast Education Committee asked the Ministry of General and Vocational Education of the Russian Federation to transfer initial vocational education and training institutions to the ownership of Novgorod Oblast. With the support of the governor, Mr M Prusak, a decree, passed by the Russian Federation Government on 28 January 1997, settled 110 matters concerning the transfer of schools and lyceums to Oblast ownership.

Once the institutions were transferred to Oblast ownership, it was considerably easier to resolve the issue of financing initial vocational education and training institutions. While only 10 billion roubles was received for these institutions from the federal budget in 1996, in 1997 the Oblast budget awarded them 27.7 billion roubles, 90.2% of the total budget estimate. The costs of salaries, stipends, compensation for book publishing and student catering were fully covered. With reciprocal offsets, it was also possible to reduce the outstanding debt for power and communal services.

Issues concerning the performance of initial vocational education and training institutions are of prime importance to all divisions and specialists. The coordinator is the deputy chairman of the committee and is also head of the department of vocational education. Detailed analysis of the performance of initial vocational education and training institutions has now become standard practice. Specialists in all kinds of areas are involved in the analysis: general secondary education, the content of initial vocational education, additional education, staffing, the provision of material resources, health and safety, secretarial etc. Every year, in October, the heads of the initial vocational

education and training institutions meet to plan the institutions' activity for the next academic session, bearing in mind the objectives and tasks of the Programme for the Development of the Oblast System of Education for 1996 – 2000. The purpose of the meeting is:

- to identify the level of analytical, organisational and supervisory activity required of the initial vocational education and training institutions;
- to evaluate the performance of the engineering teaching team in dealing with changes in the content of vocational education in line with the standards; and
- to outline prospects for offering new specialisations etc.

To achieve objectivity in evaluating the performance of initial vocational education and training institutions and their heads, the Oblast Education Committee introduced a system of bonuses for head teachers. This system of paying bonuses to the heads was worked out over several years. The latest version has been devised to take account of the situation whereby bonuses and additional payments (including those to the director), which are paid out of funds earned by the institutions over and above budget funding, are decided by the institution itself independently. The Regional Centre for the Development of Education has put in place a system of rules and methods covering the performance of initial vocational education and training institutions. Specialists from the Education Committee, who deal with performance, are also usually involved in the work of harmonising the rules and methods used by heads and deputy directors.

Once the initial vocational education and training institutions were transferred to Novgorod Oblast ownership, the Oblast governor requested the Education Committee to draft an Oblast policy for the development of initial vocational education. The policy was to cover such aspects as:

- short-term forecasts on the provision of training for new trades, professions and specialisations;
- reform of the network of schools and lyceums; and
- expansion of the scope of productive activity and extra-budgetary sources of funding.

Reports on work done in the last academic year and an outline of the specific tasks planned for the new academic year in the context of the next stage of the Oblast Programme for the development of the education system are submitted at meetings traditionally held in August.

Improvements are continually being made to the network of initial vocational education and training institutions. Of the 25 institutions in the Oblast, 6 are vocational lyceums, and the reorganisation of schools into lyceums took place, not on a political basis but as a response to very real needs at this level of vocational education and the ability of the lyceums to meet them fully. One example of the opposite trend is Vocational Lyceum No 21, which reorganised from a lyceum into a school, as the students there did not have a need for initial vocational education at a higher level. New institutions, which do not comply fully with the Standard Provisions on initial vocational education and training institutions, have been set up. Agricultural Lyceum No. 5 in the town of Staraya Russa, for example, has been running successfully for five years, implementing general and initial vocational education programmes and providing work experience and vocational training for mentally handicapped orphan children, from the 5th grade upwards. A rehabilitation unit for mentally handicapped orphans leaving school was set up and has been operating successfully at Vocational School No. 18 in the town of Borovichi. A similar unit was opened at Vocational School No. 2 in the town of Chudovo. Having assessed the needs of pupils in the city of Novgorod, four out of five initial vocational education and training institutions in the Oblast centre opened units for pupils who do not have basic education. Some of these offer one- or two-year options for obtaining a specialisation. Others offer basic education. They are funded by the city budget and implement transference programmes for vocational training and education.

At present, one of the main questions facing the vocational education system is: for what are these students being trained and what profile and what level of education should they have to be successful on the labour market? The vocational qualifications structure, the market for educational qualifications services, the market for labour and the educational product are notions which, until recently, had never been heard of by workers in the field of vocational education. Everything used to be simple and straightforward. The need for employees was planned and centralised and vocational education curricula were aimed at training students for specific jobs at specific enterprises. The 'big chiefs' were the key enterprises themselves and they were ready to help, not just in the material sense but by placing leavers in jobs in training units which operated under the patronage of the enterprises. Today things are different. The time has come for us to think of pupils and students as our own customers and work providers, and employment agencies as customers for employees. We have to get used to new attitudes and conditions for which no one was prepared. The solution to this accumulation of problems may lie in changing the structure and content of the vocational education system so that it can meet the need for a qualified workforce and respond to ongoing changes in industry, agriculture, construction and the economy as a whole. Up to now, it has been the State which has dealt with training the workforce. However, in the present conditions, it is unable to shape the market for vocational education services. Many vocational education institutions no longer get information about job placements for their students and continue to train young people in trades, professions and specialisations which are no longer in demand with employers. On the other hand, certain specialisations, such as those related to jurisprudence, management and economics, are now in vogue with some school-leavers from general education institutions. Whether these future lawyers, managers and economists will find work for which they have been trained is still not clear.

Every economy has a system for training the workforce. Such a system will involve enterprises, the general population, educational institutions and the state, in the person of different bodies representing its authority. Previously, the majority of vocational education institutions were state-owned and so the role of the state in deciding the orders placed for staff training was substantial. Now, however, no one fills this role, to any significant degree, at state level. At present, the public employment services function in response to an immediate specific situation and, while they operate at this level, employees cannot be trained for a month or a year in advance. Forecasts on the economic growth of the region are needed. Until such forecasts are available, it is very difficult to predict what the situation on the labour market will be. The Oblast Education Committee has undertaken to deal with this problem by getting information directly from employers on potential growth and the demand for labour in different sectors. To do this, the committee has drawn up a programme of 'round tables': meetings with representatives from various sectors of the economy, vocational education institutions at all levels and the employment services. In 1997, round tables were held on future training for teachers, medical workers, lawyers, those working in trade and the service industries, accountancy specialists and specialists in the construction industry. Many suggestions were put forward on changes to training profiles, the quality of specialists and the levels of education and training required. For sectors such as trade or construction, where there is no organised customer, the problem lies in determining the number of people to be trained and the quality of training to be given to specialists so that they are in demand on the labour market.

In the period 1996-1998 the first phase of the international project, 'Reform of vocational education and training in the North-west region of Russia' was implemented. In Novgorod Oblast, the coordinator of this project is the Oblast Education Committee. An analysis was carried out of the needs of the labour market in the telecommunications and tourism sectors. The results have been applied to an analysis of training needs, likely training occupations have been identified, curricula and courses have been prepared and seminars are being held to train the teachers. The outcomes of the project will be applied in all vocational education institutions and will provide the foundation for a new Oblast programme for the development of education.

A consultative committee was set up to deal with issues in vocational education and to coordinate the efforts of the vocational education institutions and the different kinds of enterprises (i.e., with different forms of organisations and various kinds of ownership and legal status) involved in the campaign to provide good quality training for a qualified workforce in line with the demands of the labour market. The committee, which operates under the aegis of the Oblast Administration, was charged with coordinating the activity of vocational education institutions, local authorities and work providers in the planning and organisation of workforce training, in line with the demands of the labour market. It was proposed that similar committees or other such bodies to deal with joint actions in the area of vocational training be set up in the oblast's towns and raions.

The experience of implementing the pilot project highlighted new approaches to resolving the problem of social partnership.

In conditions where vocational education is, on the whole, reliant on state funding, it is important to use resources in such a way that trained specialists, who will be in demand in their particular area, are directly involved in the economic growth of their towns and raions. In the final analysis, the customers for their services will be the local self-government authorities. The labour market and the work system are very closely linked. Education makes a huge contribution to the training of the labour force, but, at the same time, it is incorporated into an intricate system of social mechanisms. Choice of education is not determined by labour market considerations alone. In attempting to draw local self-government authorities into this issue, the Education Committees of Soletski raion, Starorusski raion and the town of Staraya Russa have shown the extent ti which it is possible to plan vocational training on the basis of labour market needs, starting with an analysis of the economic situation in the raion or town and examining requirements for vocational education among general school-leavers. The experiences of the town of Staraya Russa and Starorusski raion were used in a seminar held for deputy heads of towns and raions responsible for social issues and heads of all the vocational education institutions in the Oblast.

Similar seminars were held for heads of municipal education management authorities and their specialists in vocational training and education. The aim of the seminars for this category of participant was to outline the role of education management bodies and educational institutions in their dealings with the labour market. All seminars were attended by heads and specialists from the Novgorod Oblast branch of the Department of the Federal National Employment Service and the Economic Committee of the Oblast Administration.

The organisation of joint activities by educational bodies, heads of local management bodies and specialists from the employment and economic services is a necessary condition for the successful implementation of any future programme for the development of vocational education.

1.3 *Programme for reforming the initial vocational education system in St Petersburg, 1998 – 2001*

1.3.1 Initial vocational education in St Petersburg – the current situation

In St Petersburg at present, there are 106 initial vocational education and training institutions, including 43 higher level institutions (vocational lyceums), where training for skilled work (for manual/technical workers and office staff) is offered in 167 trades and specialisations.

There are 53,500 training places available in these institutions. On 1 January 1998, there were 60,400 students in them. These were distributed as follows:

- 9th grade school-leavers – 45,900 students (76.0%);
- 11th grade school-leavers – 5,600 students (9.3%); and
- students with no basic general education – 8,900 students (14.7%).

Students from other towns also attend these institutions.

Intake into the vocational schools and lyceums was:

- in 1994 – 26,900;
- in 1996 – 28,600; and
- in 1997 – 26,200.

Since 1992, the schools and lyceums have set up divisions for general education for school pupils who do not have basic general education. In 1997, the number of pupils in these divisions was 1,800.

There are 1,457 orphans (children and adolescents) in initial vocational education and training institutions. This number includes 485 minors in five homes equipped to care for adolescents.

Training in initial vocational education and training institutions in the city prepares graduates for employment in a variety of vocations and sectors. In 1997, the breakdown of graduates going to the various sectors was: 38.4% to industry, 12.9% to the service sector, 10.9% to construction, 4.0% to local authority jobs, 15.2% to catering and trade and 12.7% to transport. On average, 85% of school-leavers find employment.

Training in an industrial environment, provided by the training institutions, is an important part of vocational education. For this, students get a small wage to cover training and social support. There are industrial workshops in 80% of the vocational education and training institutions in the city. In 1996, the value of the work and services carried out in these workshops and during work experience in enterprises was 11.5 billion roubles, including 1.2 billion roubles from class and laboratory equipment.

Overall, non-budget activity in initial vocational education and training institutions in 1997 was worth 33 billion roubles or 24% of the budget financing.

For 1997, the revised budget for initial vocational education was 182.2 billion roubles, excluding capital investment, or 46.2% of the required amount calculated at current rates and prices.

In the initial vocational education and training system, a major proportion of the resources is represented by buildings, installations and equipment, valued at 1.4 billion roubles, at 1998 prices. Internal and external factors both have an important effect on the state and growth of the system.

Internal factors which affect growth positively are:

- curricula which offer different periods of tuition and planned levels of initial vocational education for graduates;
- a high level of motivation among the teaching staff involved in the teaching process in vocational schools and lyceums;
- the level of motivation of young people, which can vary according to the sector of the economy to which their trade or profession belongs; and
- the availability of a significant level of funding.

Negative internal factors which have a detrimental effect on the growth of the system are:

- the low level of pay for engineering teaching staff;
- the loss of skilled, instructor-craftsmen; and
- obsolescence of materials and equipment in training institutions.

External factors which exert a positive influence on the growth of the system are:

- the transfer of financing of the system to the regional level, which has had the effect of stabilising pay for the engineering teaching staff; and
- demarcation of the authority of federal and regional management bodies, thus allowing the particular features of a region to be taken into account properly when planning training for qualified workers.

External factors detrimental to the growth of the system are:

- the absence of medium-term or long-term forecasts of city enterprises' needs for qualified staff;
- the increase in the number of adolescents with special mental or physical needs; and
- the lack of financing to maintain buildings, repair equipment and resources, or acquire materials and tools for teaching purposes.

Forecasting the demand of the population of St Petersburg for vocational education and vocational education services

The demographic study and assessment of the long-term economic growth of St Petersburg produced the following forecast:

- an increase, in the period up to 2001, in the number of young people continuing education after school at initial and secondary vocational schools;
- an increase in the demand for retraining by the non-employed population and those who have lost their jobs as a result of restructuring in the sector;
- an increase in the demand by the employed population for vocational education services and qualifications upgrades in management and information services;
- a rise in the demand for training through self-study courses;
- a further increase in the demand for training in trade and commerce, the service industries, tourism, municipal services, construction and transport;
- a slowdown in the rate of fall in demand, followed by stabilisation and a future increase in demand, in the food industry and the arts; and
- an increase in demand for services in educational management, educational auditing and independent qualification certification services.

1.3.2 Objectives and principal tasks of the programme

The objective of the programme is to create the economic, organisational and legal mechanisms that will allow optimum use of the potential of the initial vocational education and training system to satisfy the rights of ordinary people to access to free initial vocational training and the demand of enterprises, institutions and organisations in the city for a qualified and professionally mobile workforce.

The final outcome of the programme should be that the needs of the population for high-quality vocational and educational services at different levels are met.

The principal tasks of the programme are:

- preparation and phased restructuring of the network of initial vocational education and training institutions;
- expansion of the range of vocational and educational services for various population groups and an increase, as a result of reprofiling of training, in the vocational training of employees required to work in the regional labour market (service industries, municipal services, construction, transport and roads);
- promotion of the efficient allocation and use of the financial, staff and material resources in the initial vocational education and training system;
- re-furbishment of the stock of teaching resources and the acquisition of new technical resources;
- development of a regional regulatory and legal framework for initial vocational education as an integral part of the educational structure of St Petersburg;
- raising the professional level of school principals and engineering teaching staff in initial vocational education and training institutions by making improvements to the training system and upgrading staff qualifications and their certification;
- improvement of social conditions for students by increasing financial allocations for catering and increasing the level of student grants; and
- improvement of social conditions for staff in the initial vocational education and training system by introducing the pay supplements set by Russian Federation legislation.

Ways of achieving programme objectives

- Organisation:
  - maintenance and efficient use of the vocational training institutions' fixed funds;
  - optimisation of the initial vocational education and training institution network, across territorial and sectoral boundaries;
  - expansion of the professional profiles for which training is provided in initial vocational education and training institutions;
  - expansion of the number of student places for training young people with health problems or who are disabled;
  - introduction of an independent state qualification certification system for those who have gone through a form of vocational training;
  - transition to multi-level vocational education;
  - improving the system of informing young people of the opportunities to acquire a trade or profession, in the context of the needs of enterprises and organisations in St Petersburg for qualified specialists;
  - making improvements to educational methods in initial vocational education;
  - using the potential of initial vocational education and training institutions for adult retraining and qualification upgrade courses, including courses for the non-employed population, in line with employment service requirements;

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- expansion of opportunities to implement international projects in vocational education; and
- social protection of students and workers in initial vocational education and training institutions.

■ Teaching content and techniques:

- making improvements to the mechanism of introducing state educational standards and monitoring their implementation; and
- introducing new technologies for vocational training, including modular tuition.

■ Resources:

- ensuring financing, based on standard allocations, for the initial vocational education and training system;
- expansion of the industrial production of educational institutions, as a means of partially covering the costs of vocational training;
- increase in entrepreneurial production in educational institutions, based on the trades and professions in which workers are being trained; and
- setting up resource centres so that trades and professions which are science-intensive and money-intensive can be taught.

■ Management:

- establishing a legislative framework in which the regional vocational education system can function;
- introducing an economic management model into vocational schools (contacts with the social partners, analysing the labour market, dynamic reprofiling of the training institutions and a search for alternative sources of funding);
- introducing improvements to the mechanism for the licensing, certification and national accreditation of educational institutions;
- increasing the independence of educational institutions in the market for educational services and entrepreneurial activity; and
- close cooperation with the St Petersburg Employment Committee, the raion employment services and a variety of employer organisations.

1.3.3 *Main trends in the development of the initial vocational education and training system*

1. Optimisation of the structure of the initial vocational education and training system in St Petersburg

   This would entail restructuring the network of training institutions with a view to:

   - meeting the need of the public to acquire initial vocational knowledge and vocational skills in accordance with national education standards; and
   - prognostic evaluation of the requirements of enterprises, institutions and organisations in St Petersburg for qualified staff.

The restructuring of the network of educational institutions would follow territorial and sectoral lines, having regard to the changing economy of St Petersburg.

Several educational institutions could be amalgamated in order to secure budgetary finance and to ensure a more efficient way of using existing material resources and staff.

First to be reorganised or amalgamated would be initial vocational education and training institutions, which have not been through the procedure for national licensing and certification. These have not obtained certification due to a failure to meet the conditions required for teaching and poor general effectiveness, as evidenced by their systematic failure to fulfil the plan for full establishment strength and by their continuing to train industrial and office workers for jobs which are not available in St Petersburg.

1. *Reform of the content of initial vocational education and the introduction of modern teaching techniques*

   The first step here is to draw up, at regional level, a list of trades, professions and specialisations in initial vocational education which would be specific to the economy of St Petersburg, as well as appropriate educational standards and curriculum documentation.

   New vocational training technologies, such as modular tuition and computer techniques, would be introduced.

   When introducing educational standards, it is particularly important to change the system of approval by the vocational training quality monitoring system and replace it with independent qualification certification of initial vocational education and training graduates.

2. *Resources for the system*

   An inter-school resource centre for study material and a media resource centre ('mediatech') would be set up, based on the Education Methods Centre of the Administration of St Petersburg's Education Committee, in order to provide the educational process with modern materials and resources.

3. *Making improvements to the science methods provision of the teaching process*

   Following the model outlined in the ILO paper, 'Development of modular curricula', it is proposed that the modular technology centre for initial vocational education and training be expanded.

   It is proposed to draw up standardised tests (multiple choice) for checking the quality of vocational training as part of the monitoring process.

4. *The regulatory and legal framework of initial vocational education*

   To improve the effectiveness of the economic activity of the vocational schools and lyceums, regional and regulatory legislation, offering favourable tax regimes to enterprises and organisations investing in initial vocational education and vocational training, should be introduced. Local regulatory provisions should also be drafted for the budgetary financing of initial vocational education and the extra-budgetary activities of training institutions.

5. *Social support for students and workers in the system*

   To attract young teachers and instructors into the initial vocational education and training system and to retain experienced teaching staff, pay levels have to be boosted to the average levels paid to employees in the manufacturing sector in St Petersburg.

   It would also be advisable to extend the type of catering provided for students at vocational schools to students in general education institutions.

6. *Introducing improvements in the management of the initial vocational education and training system in St Petersburg*

Between 1995 and 1998, there were fundamental changes introduced into the management of the initial vocational education and training system. Vocational school property was transferred out of federal ownership to that of the city of St Petersburg. Educational institutions have been financed out of the St Petersburg budget since 1997.

The economic and legal status of educational institutions has changed. The institutions now have the right to undertake entrepreneurial activity and to offer additional educational services on a fee-paying basis.

The introduction of national educational standards resulted in changes in the administrative functions of the Education Committee. It became necessary to work out a mechanism for introducing a Regional List of Trades, Professions and Specialisations in initial vocational education for educational institutions.

With the emergence of the labour market and the increase in the number of non-employed and unemployed, the need arose for the Education Committee and the Employment Committee to work together, in association with the employers' organisations.

The programme includes initiatives to improve the management system which focused, mainly, on developing new public institutions for managing vocational education, under the Administration of St Petersburg, including:

- participation by the Governor of St Petersburg in the work of the Initial Vocational Education Board ;
- setting up a Board of Chief Specialists, under the Education Committee;
- creating interdepartmental management and coordination structures for (a) finance and property, and (b) training and qualifications improvement for school principals and engineering teaching staff;
- organising groups of experts to work on the reform of the network of initial vocational education and training institutions, to set up resource centres and to discuss repair and construction programmes;
- setting up a single information network for initial vocational education and training institutions;
- creating a database for school principals and engineering teaching staff;
- attracting employers into the process of examining curriculum documentation, the work of the examination qualification boards and the expansion of the material resources of the educational institutions;
- coordinating and taking part in the implementation of international projects;
- cooperating in the activity of inter-school production units, raion vocational guidance centres and initial vocational education and training institutions in the implementation of a single interdepartmental programme for career guidance for adolescents; and
- transferring vocational schools to the authority of the education management bodies of territorial administrations.

1.3.4 *Priority measures for implementing the programme*

The objective of reforming the structure of the initial vocational education and training system is to be achieved by:

- drawing up short-term and medium-term forecasts of the regional job and qualification structure of the employed population;
- restructuring occupational profiles in training courses to meet labour market requirements in St Petersburg;
- amalgamating existing vocational schools and lyceums to create territorial and sectoral vocational education units;
- organising general education divisions, and
- setting up centres for the training and accommodation of orphans and adolescents not in parental care.

Improvements in the content of education and introducing new technologies are to be introduced by:

- establishing student production units (hotels, shoe workshops, cafes, hairdressing salons etc. run by students);
- offering vocational training in the new occupations on the list of trades, professions and specialisations in initial vocational education; and
- setting up centres for independent qualification certification for those who have initial vocational education.

1. *Resources*

Resources are required to:

- carry out emergency and routine major repair work to initial vocational education and training institution buildings;
- draw up plans for, and carry out, the reconstruction of hostels attached to orphanages;
- set up technical units for designing and producing videos and other media aids for vocational training; and
- set up sectoral resource centres based on key training institutions.

The provision of scientific resources for the education process needs to be improved by:

- setting up an initial vocational education and training modular technology centre, based on the ILO project 'Development of Modular Curricula';
- developing tools for monitoring the implementation of national education standards;
- drawing up standardised tests (multiple choice) for checking the quality of vocational training;
- developing national education standards for occupations on the Regional List;
- developing and implementing a regional programme for publishing studies and other literature on educational methods;
- setting up a computer network and an automated database of curriculum documentation; and
- developing a model of a school as an integrated type of institution offering general and initial vocational education to adolescents in need of special education and social rehabilitation.

Regulatory and legal framework requirements for initial vocational education include:

- drafting a law on initial vocational education for St Petersburg;
- drafting regional regulatory legislation on favourable tax regimes for enterprises and organisations investing in initial vocational education and vocational training; and
- drafting regulations for the budgetary financing of initial vocational education and training in St Petersburg.

2. *Social protection of students and workers in the initial vocational education and training system*

Measures need to be taken to:

- raise the pay of teaching staff in the initial vocational education and training system;
- review regulations on student catering in vocational schools and lyceums and in general education training units;
- make provisions for school principals and engineering staff in initial vocational education to improve their qualifications; and
- organise vocational training divisions for children and adolescents with physical and mental disabilities.

3. *Implementing international projects*

The international projects that St Petersburg is involved in are listed below.

- 'Vocational Education and Training Reform in the North-West regions of the Russian Federation', by sector:
- Telecommunications - Vocational Lyceum of Informatics and Computer Skills;
- Transport - Naval Lyceum, PU Nos. 77, 96, 107, 110, 133; and
- Tourism - Vocational Lyceum of Tourism and Hotel Services.
- 'Modernisation of construction technologies' - PU No. 50.
- 'Setting up a car servicing training centre' - Vocational Lyceum of Underground Transport.

Note:

This programme was approved by the government of St Petersburg in April 1998. This version does not include the appendices to the programme:

- 'Combined measures for reforming the system of initial vocational education';
- 'Combined programme for the use of hostel buildings';
- 'Measures for reforming the network of initial vocational education and training institutions in St Petersburg, 1998-2001';
- 'Targeted use of hostel buildings belonging to initial vocational education and training institutions in St Petersburg';
- 'Accommodation centres for orphans and adolescents not in parental care, based on initial vocational education and training institutions'; and
- the 'Regional list of initial vocational education occupations and specialisations for initial vocational education and training institutions in St Petersburg'.

APPENDIX 2

3. List of Russian training institutions participating in the project

3.1 Tourism and Hotel and Catering Sector

St Petersburg

1. *Petrovsky College.*
2. *Leningrad Oblast (Vyborg) Vocational Lyceum for Tourism.*
3. *Vocational College No. 30.*

Novgorod

1. *Novgorod Construction Teknikum*

3.2 Transport and Logistics Sector

St Petersburg

1. *Vocational College No. 77.*
2. *Vocational College No. 96.*
3. *Vocational College No. 107.*
4. *Vocational College No. 110.*
5. *Vocational College No. 133.*
6. *Naval Lyceum.*

Petrozavodsk

1. *Petrozavodsk Road Transport Teknikum.*
2. *River Transport Crew College.*

3.3 Telecommunications Sector

St Petersburg

1. Informatics and Computer Technology Lyceum.
2. Petrovsky College

Novgorod

1. Technology and Economics College.

3.4 Wood and Timber Sector

Petrozavodsk

1. *Vocational College No 19.*
2. *Vocational College No 4.*
3. *Forestry Technical College.*